Appendix A

Primacy Revision Crosswalk

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SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
SUBPART A–GENERAL			
§141.2 DEFINITIONS			
Combined distribution system	§141.2		
Consecutive system	§141.2		
Dual sample set	§141.2		
Finished water	§141.2		
GAC10	§141.2		
GAC20	§141.2		
Locational running annual average	§141.2		
Wholesale system	§141.2		
SUBPART B–MAXIMUM CONTAMINANT LEVELS			
§ 141.12 MAXIMUM CONTAMINANT LEVELS FOR TOTAL TRIHALOMETHANES.			
Section 141.12 is removed and reserved.	§ 141.12		

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SUBPART C–MONITORING AND ANALYTICAL REQUIREMENTS			
§ 141.30 TOTAL TRIHALOMETHANES SAMPLING, ANALYTICAL AND OTHER REQUIREMENTS.			
Section 141.30 is removed.	§ 141.30		
SUBPART D–REPORTING AND RECORD KEEPING			
§ 141.32 PUBLIC NOTIFICATION.			
Section 141.32 is removed and reserved.	§ 141.32		
§141.33 RECORD MAINTENANCE			
Records of microbiological analyses and turbidity analyses made pursuant to this part shall be kept for not less than 5 years.	§141.33(a)		
Copies of monitoring plans developed pursuant to this part shall be kept for the same period of time as the records of analyses taken under the plan are required to be kept under paragraph (a) of this section, except as specified elsewhere in this part.	§141.33(f)		
SUBPART F–MAXIMUM CONTAMINANT LEVEL GOALS[1]			
§141.53 MAXIMUM CONTAMINANT LEVEL GOALS FOR DISINFECTION BYPRODUCTS			

[1]States need not have corresponding MCLGs.

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Bromodichloromethane: zero Bromoform: zero Bromate: zero Chlorite: 0.8 Chloroform: 0.07 mg/L Dibromochloromethane: 0.06 Dichloroacetic acik: zero Monochloroacetic acid: 0.07 mg/L Trichloroacetic acid: 0.02 mg/L	§141.53		
SUBPART G–NATIONAL PRIMARY DRINKING WATER REGULATIONS: MAXIMUM CONTAMINANT LEVELS AND MAXIMUM RESIDUAL DISINFECTANT LEVELS			
§141.64 MAXIMUM CONTAMINANT LEVELS FOR DISINFECTION BYPRODUCTS			
Bromate and chlorite. The maximum contaminant levels (MCLs) for bromate and chlorite are as follows: Disinfection byproduct MCL (mg/L) Bromate ..... 0.010 Chlorite 1.0	§141.64(a)		
Subpart H systems serving 10,000 or more persons must comply with this paragraph (a) beginning January 1, 2002. Subpart H systems serving fewer than 10,000 persons and systems using only ground water not under the direct influence of surface water must comply with this paragraph (a) beginning January 1, 2004.	§141.64(a)(1)		

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The Administrator, pursuant to section 1412 of the Act, hereby identifies the following as the best technology, treatment techniques, or other means available for achieving compliance with the maximum contaminant levels for bromate and chlorite identified in this paragraph (a): Bromate: Control of ozone treatment process to reduce production of bromate. Chlorite: Control of treatment processes to reduce disinfectant demand and control of disinfection treatment processes to reduce disinfectant levels.	§141.64(a)(2)		
TTHM and HAA5 - Subpart L – RAA compliance. Compliance dates. Subpart H systems serving 10,000 or more persons must comply with this paragraph (b)(1) beginning January 1, 2002. Subpart H systems serving fewer than 10,000 persons and systems using only ground water not under the direct influence of surface water must comply with this paragraph (b)(1) beginning January 1, 2004. All systems must comply with these MCLs until the date specified for subpart V compliance in §141.620(c). Disinfection byproduct MCL (mg/L) Total trihalomethanes (TTHM) ..... 0.080 Haloacetic acids (five) (HAA5) 0.060	§141.64(b)(1)(i)		

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The Administrator, pursuant to section 1412 of the Act, hereby identifies the following as the best technology, treatment techniques, or other means available for achieving compliance with the maximum contaminant levels for TTHM and HAA5 identified in this paragraph (b)(1): Enhanced coagulation or enhanced softening or GAC10, with chlorine as the primary and residual disinfectant.	§141.64(b)(1)(ii)		
Subpart V—LRAA compliance. Compliance dates. The subpart V MCLs for TTHM and HAA5 must be complied with as a locational running annual average at each monitoring location beginning the date specified for subpart V compliance in §141.620(c). Disinfection byproduct MCL(mg/L) Total trihalomethanes (TTHM) ..... 0.080 Haloacetic acids (five) (HAA5) 0.060	§141.64(b)(2)(i)		
The Administrator, pursuant to section 1412 of the Act, hereby identifies the following as the best technology, treatment techniques, or other means available for achieving compliance with the maximum contaminant levels for TTHM and HAA5 identified in this paragraph (b)(2) for all systems that disinfect their source water: Enhanced coagulation or enhanced softening, plus GAC10; or nanofiltration with a molecular weight cutoff ≤ 1000 Daltons; or GAC20.	§141.64(b)(2)(ii)		
The Administrator, pursuant to section 1412 of the Act, hereby identifies the following as the best technology, treatment techniques, or other means available for achieving compliance	§141.64(b)(2)(iii)		

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with the maximum contaminant levels for TTHM and HAA5 identified in this paragraph (b)(2) for consecutive systems and applies only to the disinfected water that consecutive systems buy or otherwise receive: **Systems serving $10,000**: Improved distribution system and storage tank management to reduce residence time, plus the use of chloramines for disinfectant residual maintenance. **Systems serving <10,000**: Improved distribution system and storage tank management to reduce residence time.			
SUBPART L–DISINFECTANT RESIDUALS, DISINFECTION BYPRODUCTS, AND DISINFECTION BYPRODUCT PRECURSORS			
§141.131 ANALYTICAL REQUIREMENTS			
General. Systems must use only the analytical methods specified in this section, or their equivalent as approved by EPA, to demonstrate compliance with the requirements of this subpart and with the requirements of subparts U and V of this part. These methods are effective for compliance monitoring February 16, 1999, unless a different effective date is specified in this section or by the State.	§141.131(a)(1)		
A number of documents on methods are incorporated by reference.	§141.131(a)(2)		
Disinfection byproducts. Systems must measure disinfection byproducts by the methods (as modified by the footnotes) listed in the table included in this section.	§141.131(b)(1)		

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Analyses under this section for disinfection byproducts must be conducted by laboratories that have received certification by EPA or the State, except as specified under paragraph (b)(3) of this section. To receive certification to conduct analyses for the DBP contaminants in §§141.64, 141.135, and subparts U and V of this part, the laboratory must:	§141.131(b)(2)		
Analyze Performance Evaluation (PE) samples that are acceptable to EPA or the State at least once during each consecutive 12 month period by each method for which the laboratory desires certification.	§141.131(b)(2)(i)		
Until March 31, 2007, in these analyses of PE samples, the laboratory must achieve quantitative results within the acceptance limit on a minimum of 80% of the analytes included in each PE sample. The acceptance limit is defined as the 95% confidence interval calculated around the mean of the PE study between a maximum and minimum acceptance limit of +/-50% and +/-15% of the study mean.	§141.131(b)(2)(ii)		
Beginning April 1, 2007, the laboratory must achieve quantitative results on the PE sample analyses that are within the acceptance limits presented in the table included in this section.	§141.131(b)(2)(iii)		
Beginning April 1, 2007, report quantitative data for concentrations at least as low as the ones listed in the following table for all DBP samples analyzed for compliance with §§141.64, 141.135, and subparts U and V of this part:	§141.131(b)(2)(iv)		

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The table in this section presents which residuals are measured by which methodologies.	§141.131(c)(1)		
Bromide. EPA Methods 300.0, 300.1, 317.0 Revision 2.0, 326.0, or ASTM D 6581-00.	§141.131(d)(2)		
Total Organic Carbon (TOC). Standard Method 5310 B or 5310 B-00 (High-Temperature Combustion Method) or Standard Method 5310 C or 5310 C-00 (Persulfate-Ultraviolet or Heated-Persulfate Oxidation Method) or Standard Method 5310 D or 5310 D-00 (Wet-Oxidation Method) or EPA Method 415.3 Revision 1.1. Inorganic carbon must be removed from the samples prior to analysis. TOC samples may not be filtered prior to analysis. TOC samples must be acidified at the time of sample collection to achieve pH less than or equal to 2 with minimal addition of the acid specified in the method or by the instrument manufacturer. Acidified TOC samples must be analyzed within 28 days.	§141.131(d)(3)		
Dissolved Organic Carbon (DOC). Standard Method 5310 B or 5310 B-00 (High-Temperature Combustion Method) or Standard Method 5310 C or 5310 C-00 (Persulfate-Ultraviolet or Heated-Persulfate Oxidation Method) or Standard Method 5310 D or 5310 D-00 (Wet-Oxidation Method) or EPA Method 415.3 Revision 1.1. DOC samples must be filtered through the 0.45 Fm pore-diameter filter as soon as practical after sampling, not to exceed 48 hours. After filtration, DOC samples must be acidified to achieve pH less than or equal to 2 with minimal addition of the acid specified in the method or by the instrument manufacturer.	§141.131(d)(4)(i)		

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Acidified DOC samples must be analyzed within 28 days of sample collection. Inorganic carbon must be removed from the samples prior to analysis. Water passed through the filter prior to filtration of the sample must serve as the filtered blank. This filtered blank must be analyzed using procedures identical to those used for analysis of the samples and must meet the following criteria: DOC < 0.5 mg/L.			
Ultraviolet Absorption at 254 nm (UV_{254}). Standard Method 5910 B or 5910 B-00 (Ultraviolet Absorption Method) or EPA Method 415.3 Revision 1.1. UV absorption must be measured at 253.7 nm (may be rounded off to 254 nm). Prior to analysis, UV_{254} samples must be filtered through a 0.45 Fm pore-diameter filter. The pH of UV_{254} samples may not be adjusted. Samples must be analyzed as soon as practical after sampling, not to exceed 48 hours.	§141.131(d)(4)(ii)		
Magnesium. All methods allowed in §141.23(k)(1) for measuring magnesium.	§141.131(d)(6)		
§141.132 MONITORING REQUIREMENTS			
Redesignating paragraphs (b)(1)(iii) through (b)(1)(v) as paragraphs (b)(1)(iv) through (b)(1)(vi), Adding a new paragraph (b)(1)(iii) ; Revising the newly redesignated paragraph (b)(1)(iv)	§141.132(b)(1)(iii) – (v)		
Monitoring requirements for source water TOC. In order to qualify for reduced monitoring for TTHM and HAA5 under paragraph (b)(1)(ii) of this section, subpart H systems not	§141.132(b)(1)(iii)		

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monitoring under the provisions of paragraph (d) of this section must take monthly TOC samples every 30 days at a location prior to any treatment, beginning April 1, 2008 or earlier, if specified by the State. In addition to meeting other criteria for reduced monitoring in paragraph (b)(1)(ii) of this section, the source water TOC running annual average must be $\leq$4.0 mg/L (based on the most recent four quarters of monitoring) on a continuing basis at each treatment plant to reduce or remain on reduced monitoring for TTHM and HAA5. Once qualified for reduced monitoring for TTHM and HAA5 under paragraph (b)(1)(ii) of this section, a system may reduce source water TOC monitoring to quarterly TOC samples taken every 90 days at a location prior to any treatment.			
Systems on a reduced monitoring schedule may remain on that reduced schedule as long as the average of all samples taken in the year (for systems which must monitor quarterly) or the result of the sample (for systems which must monitor no more frequently than annually) is no more than 0.060 mg/L and 0.045 mg/L for TTHMs and HAA5, respectively. Systems that do not meet these levels must resume monitoring at the frequency identified in paragraph (b)(1)(i) of this section (minimum monitoring frequency column) in the quarter immediately following the monitoring period in which the system exceeds 0.060 mg/L or 0.045 mg/L for TTHMs and HAA5, respectively. For systems using only ground water not under the direct influence of surface water and serving fewer than 10,000 persons, if either the TTHM annual average is >0.080 mg/L or the HAA5 annual average is >0.060 mg/L, the system must go to the increased monitoring identified in paragraph (b)(1)(i) of this section (sample location column) in the quarter	§141.132(b)(1)(iv)		

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immediately following the monitoring period in which the system exceeds 0.080 mg/L or 0.060 mg/L for TTHMs or HAA5 respectively.			
Until March 31, 2009, systems required to analyze for bromate may reduce monitoring from monthly to quarterly, if the system's average source water bromide concentration is less than 0.05 mg/L based on representative monthly bromide measurements for one year. The system may remain on reduced bromate monitoring until the running annual average source water bromide concentration, computed quarterly, is equal to or greater than 0.05 mg/L based on representative monthly measurements. If the running annual average source water bromide concentration is $0.05 mg/L, the system must resume routine monitoring required by paragraph (b)(3)(i) of this section in the following month.	§141.132(b)(3)(ii)(A)		
Beginning April 1, 2009, systems may no longer use the provisions of paragraph (b)(3)(ii)(A) of this section to qualify for reduced monitoring. A system required to analyze for bromate may reduce monitoring from monthly to quarterly, if the system's running annual average bromate concentration is ≤0.0025 mg/L based on monthly bromate measurements under paragraph (b)(3)(i) of this section for the most recent four quarters, with samples analyzed using Method 317.0 Revision 2.0, 326.0 or 321.8. If a system has qualified for reduced bromate monitoring under paragraph (b)(3)(ii)(A) of this section, that system may remain on reduced monitoring as long as the running annual average of quarterly bromate samples ≤0.0025 mg/L based on samples analyzed using Method 317.0 Revision 2.0, 326.0, or 321.8. If the running annual average bromate concentration is	§141.132(b)(3)(ii)(B)		

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>0.0025 mg/L, the system must resume routine monitoring required by paragraph (b)(3)(i) of this section.			
§ 141.133 COMPLIANCE REQUIREMENTS.			
Section 141.133 is amended in the last sentence of paragraph (d) by revising the reference "§141.32" to read "subpart Q of this part".	§141.133(d)		
§141.135 TREATMENT TECHNIQUE FOR CONTROL OF DISINFECTION BYPRODUCT (DBP) PRECURSORS			
Softening that results in removing at least 10 mg/L of magnesium hardness (as $CaCO_3$), measured monthly according to §141.131(d)(6) and calculated quarterly as a running annual average.	§141.135(a)(3)(ii)		
SUBPART O–CONSUMER CONFIDENCE REPORTS			
§141.151 PURPOSE AND APPLICABILITY OF THIS SUBPART			
For the purpose of this subpart, *detected* means: at or above the levels prescribed by §141.23(a)(4) for inorganic contaminants, at or above the levels prescribed by §141.24(f)(7) for the contaminants listed in §141.61(a), at or above the levels prescribed by §141.24(h)(18) for the contaminants listed in §141.61(c), at or above the levels prescribed by §141.131(b)(2)(iv) for the contaminants or contaminant groups listed in §141.64, and at or above the levels prescribed by §141.25(c) for radioactive contaminants.	§141.151(d)		

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§141.153 CONTENT OF THE REPORTS			
When compliance with the MCL is determined by calculating a running annual average of all samples taken at a monitoring location: the highest average of any of the monitoring locations and the range of all monitoring locations expressed in the same units as the MCL. For the MCLs for TTHM and HAA5 in §141.64(b)(2), systems must include the highest locational running annual average for TTHM and HAA5 and the range of individual sample results for all monitoring locations expressed in the same units as the MCL. If more than one location exceeds the TTHM or HAA5 MCL, the system must include the locational running annual averages for all locations that exceed the MCL.	§141.153(d)(4)(iv)(B)		
When compliance with the MCL is determined on a system-wide basis by calculating a running annual average of all samples at all monitoring locations: the average and range of detection expressed in the same units as the MCL. The system is required to include individual sample results for the IDSE conducted under subpart U of this part when determining the range of TTHM and HAA5 results to be reported in the annual consumer confidence report for the calendar year that the IDSE samples were taken.	§141.153(d)(4)(iv)(C)		
SUBPART Q–PUBLIC NOTIFICATION OF DRINKING WATER VIOLATIONS			
APPENDIX A TO SUBPART Q OF PART 141–NPDWR VIOLATIONS AND OTHER SITUATIONS REQUIRING PUBLIC NOTICE			
17. In Subpart Q, Appendix A various endnotes are amended.	Appendix A Endnotes		

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In entry I.B.2. in the fifth column, remove the endnote citation "9" and add in its place "11"; In entry I.B.11. in the fourth column, remove the endnote citation "10" and add in its place "12"; In entry I.B.12. in the fourth column, remove the endnote citation "10" and add in its place "12"; In entry I.G. in the first column, remove the endnote citation "11" and add in its place "13"; In entry I.G.1. in the third column, remove the endnote citation "12" and add in its place "14" and remove the citation in the third column "141.12,141.64(a)" and in its place add "141.64(b)" (keeping the endnote citation to endnote 14) and in the fifth column remove the citation "141.30" and add in numerical order the citations "141.600-141.605, 141.620-141.629"; In entry I.G.2. revise the entry "141.64(a)" to read "141.64(b)" and in the fifth column add in numerical order the citations "141.600-141.605, 141.620-141.629". In entry I.G.7. in the fourth column, remove the endnote citation "13" and add in its place "15"; In entry I.G.8. in the second column, remove the endnote citation "14" and add in its place "16"; In entry II. in the first column, remove the endnote citation "15"	Appendix A Endnotes		

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and add in its place "17"; In entry III.A. in the third column, remove the endnote citation "16" and add in its place "18"; In entry III.B in the third column, remove the endnote citation "17" and add in its place "19"; In entry IV.E. in the first column, remove the endnote citation "18" and add in its place 20"; and In entry III.F in the second column, remove the endnote citation "19" and add in its place "21".			
18. In Subpart Q, Appendix A, remove endnote14 and add in its place, to read as follows: "14. §§141.64(b)(1) and 141.132(a)-(b) apply until §§ 141.620-141.630 take effect under the schedule in § 141.620(c).	Appendix A Endnote 14		
APPENDIX B TO SUBPART Q OF PART 141 – STANDARD HEALTH EFFECTS LANGUAGE FOR PUBLIC NOTIFICATION			
19. In Subpart Q, Appendix B various endnotes are amended.	Appendix B Endnotes		
In entry G.77. in the third column, remove the endnote citation "16" and add in its place "17"; In entry H. (the title) in the first column, remove the endnote citation "17" and add in its place "18"; In entry H.80. in the third column, remove the endnote citations	Appendix B Endnotes		

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"17, 18" and add in its place "19, 20" and remove the number "0.10/"; In entry H.81. in the third column, remove the endnote citation "20" and add in its place "21"; and In entry H.84. in the second column, remove the endnote citation "21" and add in its place "22" and in the third column remove the endnote citation "22" and add in its place "23".			
In Subpart Q, Appendix B, remove endnotes 18 and 19 and add in their place, to read as follows: "18. Surface water systems and ground water systems under the direct influence of surface water are regulated under subpart H of 40 CFR 141. Subpart H community and non-transient non-community systems serving $10,000 must comply with subpart L DBP MCLs and disinfectant maximum residual disinfectant levels (MRDLs) beginning January 1, 2002. All other community and non-transient non-community systems must comply with subpart L DBP MCLs and disinfectant MRDLs beginning January 1, 2004. Subpart H transient non-community systems serving $10,000 that use chlorine dioxide as a disinfectant or oxidant must comply with the chlorine dioxide MRDL beginning January 1, 2002. All other transient non-community systems that use chlorine dioxide as a disinfectant or oxidant must comply with the chlorine dioxide MRDL beginning January 1, 2004.	Appendix B Endnote 18		

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Community and non-transient non-community systems must comply with subpart V TTHM and HAA5 MCLs of 0.080 mg/L and 0.060 mg/L, respectively (with compliance calculated as a locational running annual average) on the schedule in §141.620."	Appendix B Endnote 19		
SUBPART U–INITIAL DISTRIBUTION SYSTEM EVALUATIONS			
§141.600 GENERAL REQUIREMENTS			
The requirements of subpart U of this part constitute national primary drinking water regulations. The regulations in this subpart establish monitoring and other requirements for identifying subpart V compliance monitoring locations for determining compliance with maximum contaminant levels for total trihalomethanes (TTHM) and haloacetic acids (five)(HAA5). You must use an Initial Distribution System Evaluation (IDSE) to determine locations with representative high TTHM and HAA5 concentrations throughout your distribution system. IDSEs are used in conjunction with, but separate from, subpart L compliance monitoring, to identify and select subpart V compliance monitoring locations.	§141.600(a)		
Applicability. You are subject to these requirements if your system is a community water system that uses a primary or residual disinfectant other than ultraviolet light or delivers water that has been treated with a primary or residual disinfectant other than ultraviolet light; or if your system is a nontransient noncommunity water system that serves at least 10,000 people and uses a primary or residual disinfectant other than ultraviolet light	§141.600(b)		

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or delivers water that has been treated with a primary or residual disinfectant other than ultraviolet light.			
Schedule. You must comply with the requirements of this subpart on the schedule in the table in this paragraph (c)(1).	§141.600(c)(1)		
Systems serving ≥ 100,000: You must submit your standard monitoring plan or system specific study plan[1] or 40/30 certification[2] to the state by or receive very small system waiver from state - October 1, 2006 You must complete your standard monitoring or system specific study by - September 30, 2008 You must submit your IDSE report to the state by[3] - January 1, 2009	§141.600(c)(1)(i)		
Systems serving 50,000-99,999: You must submit your standard monitoring plan or system specific study plan[1] or 40/30 certification[2] to the state by or receive very small system waiver from state - April 1, 2007 You must complete your standard monitoring or system specific study by - March 31, 2009 You must submit your IDSE report to the state by[3] - July 1, 2009	§141.600(c)(1)(ii)		
Systems serving 10,000-49,999: You must submit your standard monitoring plan or system specific study plan[1] or 40/30 certification[2] to the state by or receive very small system waiver from state - October 1, 2007 You must complete your standard monitoring or system specific	§141.600(c)(1)(iii)		

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study by - September 30, 2009 You must submit your IDSE report to the state by [3] - January 1, 2010			
Systems serving ≤ 10,000 (CWS Only): You must submit your standard monitoring plan or system specific study plan[1] or 40/30 certification[2] to the state by or receive very small system waiver from state - April 1, 2008 You must complete your standard monitoring or system specific study by - March 31, 2010 You must submit your IDSE report to the state by [3] - July 1, 2010	§141.600(c)(1)(iv)		
Consecutive system or wholesale system: at the same time as the system with the earliest compliance date in the combined distribution system	§141.600(c)(1)(v)		
[1] If, within 12 months after the date identified in this column, the State does not approve your plan or notify you that it has not yet completed its review, you may consider the plan that you submitted as approved. You must implement that plan and you must complete standard monitoring or a system specific study no later than the date identified in the third column.	Footnote to §141.600(c)(1)(i) - (v)		
[2] You must submit your 40/30 certification under §141.603 by the date indicated.	Footnote to §141.600(c)(1)(i) - (v)		
[3] If, within three months after the date identified in this column (nine months after the date identified in this column if you must comply on the schedule in paragraph (c)(1)(iii) of this section), the State does not approve your IDSE report or notify you that it has	Footnote to §141.600(c)(1)(i) - (v)		

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not yet completed its review, you may consider the report that you submitted as approved and you must implement the recommended subpart V monitoring as required.			
For the purpose of the schedule in paragraph (c)(1) of this section, the State may determine that the combined distribution system does not include certain consecutive systems based on factors such as receiving water from a wholesale system only on an emergency basis or receiving only a small percentage and small volume of water from a wholesale system. The State may also determine that the combined distribution system does not include certain wholesale systems based on factors such as delivering water to a consecutive system only on an emergency basis or delivering only a small percentage and small volume of water to a consecutive system.	§141.600(c)(2)		
You must conduct standard monitoring that meets the requirements in §141.601, or a system specific study that meets the requirements in §141.602, or certify to the State that you meet 40/30 certification criteria under §141.603, or qualify for a very small system waiver under §141.604.	§141.600(d)		
You must have taken the full complement of routine TTHM and HAA5 compliance samples required of a system with your population and source water under subpart L of this part (or you must have taken the full complement of reduced TTHM and HAA5 compliance samples required of a system with your population and source water under subpart L if you meet reduced monitoring criteria under subpart L of this part) during the period specified in §141.603(a) to meet the 40/30 certification criteria in	§141.600(d)(1)		

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
§141.603. You must have taken TTHM and HAA5 samples under §§141.131 and 141.132 to be eligible for the very small system waiver in §141.604.			
If you have not taken the required samples, you must conduct standard monitoring that meets the requirements in §141.601, or a system specific study that meets the requirements in §141.602.	§141.600(d)(2)		
You must use only the analytical methods specified in §141.131, or otherwise approved by EPA for monitoring under this subpart, to demonstrate compliance with the requirements of this subpart.	§141.600(e)		
IDSE results will not be used for the purpose of determining compliance with MCLs in §141.64.	§141.600(f)		
§141.601 STANDARD MONITORING			
Standard monitoring plan. Your standard monitoring plan must comply with paragraphs (a)(1) through (a)(4) of this section. You must prepare and submit your standard monitoring plan to the State according to the schedule in §141.600(c).	§141.601(a)		
Your standard monitoring plan must include a schematic of your distribution system (including distribution system entry points and their sources, and storage facilities), with notes indicating locations and dates of all projected standard monitoring, and all projected subpart L compliance monitoring.	§141.601(a)(1)		

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
Your standard monitoring plan must include justification of standard monitoring location selection and a summary of data you relied on to justify standard monitoring location selection.	§141.601(a)(2)		
Your standard monitoring plan must specify the population served and system type (subpart H or ground water).	§141.601(a)(3)		
You must retain a complete copy of your standard monitoring plan submitted under this paragraph (a), including any State modification of your standard monitoring plan, for as long as you are required to retain your IDSE report under paragraph (c)(4) of this section.	§141.601(a)(4)		
Standard monitoring. You must monitor as indicated in the table in this paragraph (b)(1). You must collect dual sample sets at each monitoring location. One sample in the dual sample set must be analyzed for TTHM. The other sample in the dual sample set must be analyzed for HAA5. You must conduct one monitoring period during the peak historical month for TTHM levels or HAA5 levels or the month of warmest water temperature. You must review available compliance, study, or operational data to determine the peak historical month for TTHM or HAA5 levels or warmest water temperature.	§141.601(b)(1)		
You must take samples at locations other than the existing subpart L monitoring locations. Monitoring locations must be distributed throughout the distribution system.	§141.601(b)(2)		
If the number of entry points to the distribution system is fewer than the specified number of entry point monitoring locations,	§141.601(b)(3)		

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
excess entry point samples must be replaced equally at high TTHM and HAA5 locations. If there is an odd extra location number, you must take a sample at a high TTHM location. If the number of entry points to the distribution system is more than the specified number of entry point monitoring locations, you must take samples at entry points to the distribution system having the highest annual water flows.			
Your monitoring under this paragraph (b) may not be reduced under the provisions of §141.29 and the State may not reduce your monitoring using the provisions of §142.16(m).	§141.601(b)(4)		
IDSE report. Your IDSE report must include the elements required in paragraphs (c)(1) through (c)(4) of this section. You must submit your IDSE report to the State according to the schedule in §141.600(c).	§141.601(c)		
Your IDSE report must include all TTHM and HAA5 analytical results from subpart L compliance monitoring and all standard monitoring conducted during the period of the IDSE as individual analytical results and LRAAs presented in a tabular or spreadsheet format acceptable to the State. If changed from your standard monitoring plan submitted under paragraph (a) of this section, your report must also include a schematic of your distribution system, the population served, and system type (subpart H or ground water).	§141.601(c)(1)		
Your IDSE report must include an explanation of any deviations from your approved standard monitoring plan.	§141.601(c)(2)		

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
You must recommend and justify subpart V compliance monitoring locations and timing based on the protocol in §141.605.	§141.601(c)(3)		
You must retain a complete copy of your IDSE report submitted under this section for 10 years after the date that you submitted your report. If the State modifies the subpart V monitoring requirements that you recommended in your IDSE report or if the State approves alternative monitoring locations, you must keep a copy of the State's notification on file for 10 years after the date of the State's notification. You must make the IDSE report and any State notification available for review by the State or the public.	§141.601(c)(4)		
§141.602 SYSTEM SPECIFIC STUDIES			
System specific study plan. Your system specific study plan must be based on either existing monitoring results as required under paragraph (a)(1) of this section or modeling as required under paragraph (a)(2) of this section. You must prepare and submit your system specific study plan to the State according to the schedule in §141.600(c).	§141.602(a)		
Existing monitoring results. You may comply by submitting monitoring results collected before you are required to begin monitoring under §141.600(c). The monitoring results and analysis must meet the criteria in paragraphs (a)(1)(i) and (a)(1)(ii) of this section.	§141.602(a)(1)		
Minimum requirements. TTHM and HAA5 results must be based on samples collected and analyzed in accordance with §141.131.	§141.602(a)(1)(i)(A)		

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
Samples must be collected no earlier than five years prior to the study plan submission date.			
The monitoring locations and frequency must meet the conditions identified in this paragraph (a)(1)(i)(B). Each location must be sampled once during the peak historical month for TTHM levels or HAA5 levels or the month of warmest water temperature for every 12 months of data submitted for that location. Monitoring results must include all subpart L compliance monitoring results plus additional monitoring results as necessary to meet minimum sample requirements.	§141.602(a)(1)(i)(B)		
Reporting monitoring results. You must report the information in this paragraph (a)(1)(ii).	§141.602(a)(1)(ii)		
You must report previously collected monitoring results and certify that the reported monitoring results include all compliance and non-compliance results generated during the time period beginning with the first reported result and ending with the most recent subpart L results.	§141.602(a)(1)(ii)(A)		
You must certify that the samples were representative of the entire distribution system and that treatment, and distribution system have not changed significantly since the samples were collected.	§141.602(a)(1)(ii)(B)		
Your study monitoring plan must include a schematic of your distribution system (including distribution system entry points and their sources, and storage facilities), with notes indicating the locations and dates of all completed or planned system specific study monitoring.	§141.602(a)(1)(ii)(C)		

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
Your system specific study plan must specify the population served and system type (subpart H or ground water).	§141.602(a)(1)(ii)(D)		
You must retain a complete copy of your system specific study plan submitted under this paragraph (a)(1), including any State modification of your system specific study plan, for as long as you are required to retain your IDSE report under paragraph (b)(5) of this section.	§141.602(a)(1)(ii)(E)		
If you submit previously collected data that fully meet the number of samples required under paragraph (a)(1)(i)(B) of this section and the State rejects some of the data, you must either conduct additional monitoring to replace rejected data on a schedule the State approves or conduct standard monitoring under §141.601.	§141.602(a)(1)(ii)(F)		
Modeling. You may comply through analysis of an extended period simulation hydraulic model. The extended period simulation hydraulic model and analysis must meet the criteria in this paragraph (a)(2).	§141.602(a)(2)		
Minimum requirements. The model must simulate 24 hour variation in demand and show a consistently repeating 24 hour pattern of residence time.	§141.602(a)(2)(i)(A)		
The model must represent the criteria listed in paragraphs (a)(2)(i)(B)(*1*) through (*9*) of this section.	§141.602(a)(2)(i)(B)		
75% of pipe volume;	§141.602(a)(2)(i)(B)(1)		
50% of pipe length;	§141.602(a)(2)(i)(B)(2)		

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All pressure zones;	§141.602(a)(2)(i)(B)(3)		
All 12-inch diameter and larger pipes;	§141.602(a)(2)(i)(B)(4)		
All 8-inch and larger pipes that connect pressure zones, influence zones from different sources, storage facilities, major demand areas, pumps, and control valves, or are known or expected to be significant conveyors of water;	§141.602(a)(2)(i)(B)(5)		
6-inch and larger pipes that connect remote areas of a distribution system to the main portion of the system;	§141.602(a)(2)(i)(B)(6)		
All storage facilities with standard operations represented in the model; and	§141.602(a)(2)(i)(B)(7)		
All active pump stations with controls represented in the model; and	§141.602(a)(2)(i)(B)(8)		
All active control valves.	§141.602(a)(2)(i)(B)(9)		
The model must be calibrated, or have calibration plans, for the current configuration of the distribution system during the period of high TTHM formation potential. All storage facilities must be evaluated as part of the calibration process. All required calibration must be completed no later than 12 months after plan submission.	§141.602(a)(2)(i)(C)		
Reporting modeling. Your system specific study plan must include the information in this paragraph (a)(2)(ii).	§141.602(a)(2)(C)(ii)		

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Tabular or spreadsheet data demonstrating that the model meets requirements in paragraph (a)(2)(i)(B) of this section.	§141.602(a)(2)(C)(ii)(A)		
A description of all calibration activities undertaken, and if calibration is complete, a graph of predicted tank levels versus measured tank levels for the storage facility with the highest residence time in each pressure zone, and a time series graph of the residence time at the longest residence time storage facility in the distribution system showing the predictions for the entire simulation period (i.e., from time zero until the time it takes to for the model to reach a consistently repeating pattern of residence time).	§141.602(a)(2)(C)(ii)(B)		
Model output showing preliminary 24 hour average residence time predictions throughout the distribution system.	§141.602(a)(2)(C)(ii)(C)		
Timing and number of samples representative of the distribution system planned for at least one monitoring period of TTHM and HAA5 dual sample monitoring at a number of locations no less than would be required for the system under standard monitoring in §141.601 during the historical month of high TTHM. These samples must be taken at locations other than existing subpart L compliance monitoring locations.	§141.602(a)(2)(C)(ii)(D)		
Description of how all requirements will be completed no later than 12 months after you submit your system specific study plan.	§141.602(a)(2)(C)(ii)(E)		
Schematic of your distribution system (including distribution system entry points and their sources, and storage facilities), with notes indicating the locations and dates of all completed system	§141.602(a)(2)(C)(ii)(F)		

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
specific study monitoring (if calibration is complete) and all subpart L compliance monitoring.			
Population served and system type (subpart H or ground water).	§141.602(a)(2)(C)(ii)(G)		
You must retain a complete copy of your system specific study plan submitted under this paragraph (a)(2), including any State modification of your system specific study plan, for as long as you are required to retain your IDSE report under paragraph (b)(7) of this section.	§141.602(a)(2)(C)(ii)(H)		
If you submit a model that does not fully meet the requirements under paragraph (a)(2) of this section, you must correct the deficiencies and respond to State inquiries concerning the model. If you fail to correct deficiencies or respond to inquiries to the State's satisfaction, you must conduct standard monitoring under §141.601.	§141.602(a)(2)(C)(iii)		
IDSE report. Your IDSE report must include the elements required in paragraphs (b)(1) through (b)(6) of this section. You must submit your IDSE report according to the schedule in §141.600(c).	§141.602(b)		

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
Your IDSE report must include all TTHM and HAA5 analytical results from subpart L compliance monitoring and all system specific study monitoring conducted during the period of the system specific study presented in a tabular or spreadsheet format acceptable to the State. If changed from your system specific study plan submitted under paragraph (a) of this section, your IDSE report must also include a schematic of your distribution system, the population served; and system type (subpart H or ground water).	§141.602(b)(1)		
If you used the modeling provision under paragraph (a)(2) of this section, you must include final information for the elements described in paragraph (a)(2)(ii) of this section, and a 24-hour time series graph of residence time for each subpart V compliance monitoring location selected.	§141.602(b)(2)		
You must recommend and justify subpart V compliance monitoring locations and timing based on the protocol in §141.605.	§141.602(b)(3)		
Your IDSE report must include an explanation of any deviations from your approved system specific study plan.	§141.602(b)(4)		
Your IDSE report must include the basis (analytical and modeling results) and justification you used to select the recommended subpart V monitoring locations.	§141.602(b)(5)		
You may submit your IDSE report in lieu of your system specific study plan on the schedule identified in §141.600(c) for submission of the system specific study plan if you believe that	§141.602(b)(6)		

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you have the necessary information by the time that the system specific study plan is due. If you elect this approach, your IDSE report must also include all information required under paragraph (a) of this section.			
You must retain a complete copy of your IDSE report submitted under this section for 10 years after the date that you submitted your IDSE report. If the State modifies the subpart V monitoring requirements that you recommended in your IDSE report or if the State approves alternative monitoring locations, you must keep a copy of the State's notification on file for 10 years after the date of the State's notification. You must make the IDSE report and any State notification available for review by the State or the public.	§141.602(b)(7)		
§141.603 40/30 CERTIFICATION			
Eligibility. You are eligible for 40/30 certification if you had no TTHM or HAA5 monitoring violations under subpart L of this part and no individual sample exceeded 0.040 mg/L for TTHM or 0.030 mg/L for HAA5 during an eight consecutive calendar quarter period beginning no earlier than the date specified in this paragraph (a).	§141.603(a)		
If your 40/30 Certification Is Due October 1, 2006 Then your eligibility for 40/30 certification is based on eight consecutive calendar quarters of subpart L compliance monitoring results beginning no earlier than [1] January 2004	§141.603(a)(1)		
If your 40/30 Certification Is Due April 1, 2007 Then your eligibility for 40/30 certification is based on eight consecutive calendar quarters of subpart L compliance monitoring results	§141.603(a)(2)		

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
beginning no earlier than [1] January 2004			
If your 40/30 Certification Is Due October 1, 2007 Then your eligibility for 40/30 certification is based on eight consecutive calendar quarters of subpart L compliance monitoring results beginning no earlier than [1] January 2005	§141.603(a)(3)		
If your 40/30 Certification Is Due April 1, 2008 Then your eligibility for 40/30 certification is based on eight consecutive calendar quarters of subpart L compliance monitoring results beginning no earlier than [1] January 2005	§141.603(a)(4)		
[1] Unless you are on reduced monitoring under subpart L of this part and were not required to monitor during the specified period. If you did not monitor during the specified period, you must base your eligibility on compliance samples taken during the 12 months preceding the specified period.	Footnote to §141.603(a)(1) - (4)		
40/30 certification. You must certify to your State that every individual compliance sample taken under subpart L of this part during the periods specified in paragraph (a) of this section were $\leq$0.040 mg/L for TTHM and $\leq$0.030 mg/L for HAA5, and that you have not had any TTHM or HAA5 monitoring violations during the period specified in paragraph (a) of this section.	§141.603(b)(1)		

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The State may require you to submit compliance monitoring results, distribution system schematics, and/or recommended subpart V compliance monitoring locations in addition to your certification. If you fail to submit the requested information, the State may require standard monitoring under §141.601 or a system specific study under §141.602.	§141.603(b)(2)		
The State may still require standard monitoring under §141.601 or a system specific study under §141.602 even if you meet the criteria in paragraph (a) of this section.	§141.603(b)(3)		
You must retain a complete copy of your certification submitted under this section for 10 years after the date that you submitted your certification. You must make the certification, all data upon which the certification is based, and any State notification available for review by the State or the public.	§141.603(b)(4)		
§141.604 VERY SMALL SYSTEM WAIVERS			
If you serve fewer than 500 people and you have taken TTHM and HAA5 samples under subpart L of this part, you are not required to comply with this subpart unless the State notifies you that you must conduct standard monitoring under §141.601 or a system specific study under §141.602.	§141.604(a)		
If you have not taken TTHM and HAA5 samples under subpart L of this part or if the State notifies you that you must comply with this subpart, you must conduct standard monitoring under §141.601 or a system specific study under §141.602.	§141.604(b)		

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
§141.605 SUBPART V COMPLIANCE MONITORING LOCATION RECOMMENDATIONS			
Your IDSE report must include your recommendations and justification for where and during what month(s) TTHM and HAA5 monitoring for subpart V of this part should be conducted. You must base your recommendations on the criteria in paragraphs (b) through (e) of this section.	§141.605(a)		
You must select the number of monitoring locations specified in the table in this paragraph (b). You will use these recommended locations as subpart V routine compliance monitoring locations, unless State requires different or additional locations. You should distribute locations throughout the distribution system to the extent possible.	§141.605(b)		
You must recommend subpart V compliance monitoring locations based on standard monitoring results, system specific study results, and subpart L compliance monitoring results. You must follow the protocol in paragraphs (c)(1) through (c)(8) of this section. If required to monitor at more than eight locations, you must repeat the protocol as necessary. If you do not have existing subpart L compliance monitoring results or if you do not have enough existing subpart L compliance monitoring results, you must repeat the protocol, skipping the provisions of paragraphs (c)(3) and (c)(7) of this section as necessary, until you have identified the required total number of monitoring locations.	§141.605(c)		
Location with the highest TTHM LRAA not previously selected as a subpart V monitoring location.	§141.605(c)(1)		

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
Location with the highest HAA5 LRAA not previously selected as a subpart V monitoring location.	§141.605(c)(2)		
Existing subpart L average residence time compliance monitoring location (maximum residence time compliance monitoring location for ground water systems) with the highest HAA5 LRAA not previously selected as a subpart V monitoring location.	§141.605(c)(3)		
Location with the highest TTHM LRAA not previously selected as a subpart V monitoring location.	§141.605(c)(4)		
Location with the highest TTHM LRAA not previously selected as a subpart V monitoring location.	§141.605(c)(5)		
Location with the highest HAA5 LRAA not previously selected as a subpart V monitoring location.	§141.605(c)(6)		
Existing subpart L average residence time compliance monitoring location (maximum residence time compliance monitoring location for ground water systems) with the highest TTHM LRAA not previously selected as a subpart V monitoring location.	§141.605(c)(7)		
Location with the highest HAA5 LRAA not previously selected as a subpart V monitoring location.	§141.605(c)(8)		
You may recommend locations other than those specified in paragraph (c) of this section if you include a rationale for selecting other locations. If the State approves the alternate locations, you must monitor at these locations to determine compliance under subpart V of this part.	§141(d)		

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
Your recommended schedule must include subpart V monitoring during the peak historical month for TTHM and HAA5 concentration, unless the State approves another month. Once you have identified the peak historical month, and if you are required to conduct routine monitoring at least quarterly, you must schedule subpart V compliance monitoring at a regular frequency of every 90 days or fewer.	§141(e)		
SUBPART V–STAGE 2 DISINFECTION BYPRODUCTS REQUIREMENTS			
§141.620 GENERAL REQUIREMENTS			
The requirements of subpart V of this part constitute national primary drinking water regulations. The regulations in this subpart establish monitoring and other requirements for achieving compliance with maximum contaminant levels based on locational running annual averages (LRAA) for total trihalomethanes (TTHM) and haloacetic acids (five)(HAA5), and for achieving compliance with maximum residual disinfectant residuals for chlorine and chloramine for certain consecutive systems.	§141.620(a)		
Applicability. You are subject to these requirements if your system is a community water system or a nontransient noncommunity water system that uses a primary or residual disinfectant other than ultraviolet light or delivers water that has been treated with a primary or residual disinfectant other than ultraviolet light.	§141.620(b)		

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
Schedule. You must comply with the requirements in this subpart on the schedule in the following table based on your system type.	§141.620(c)		
Systems serving ≥ 100,000: April 1, 2012	§141.620(c)(1)		
Systems serving 50,000-99,999: October 1, 2012	§141.620(c)(2)		
Systems serving 10,000-49,999: October 1, 2013	§141.620(c)(3)		
Systems serving < 10,000: October 1, 2013 if no *Cryptosporidium* monitoring is required under §141.701(a)(4) OR October 1, 2014 if *Cryptosporidium* monitoring is required under §141.701(a)(4) or (a)(6)	§141.620(c)(4)		
Consecutive system or wholesale system: at the same time as the system with the earliest compliance date in the combined distribution system	§141.620(c)(5)		
Your monitoring frequency is specified in §141.621(a)(2).	§141.620(c)(6)		
If you are required to conduct quarterly monitoring, you must begin monitoring in the first full calendar quarter that includes the compliance date in the table in this paragraph (c).	§141.620(c)(6)(i)		
If you are required to conduct monitoring at a frequency that is less than quarterly, you must begin monitoring in the calendar month recommended in the IDSE report prepared under §141.601 or §141.602 or the calendar month identified in the subpart V monitoring plan developed under §141.622 no later than 12 months after the compliance date in this table.	§141.620(c)(6)(ii)		

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
If you are required to conduct quarterly monitoring, you must make compliance calculations at the end of the fourth calendar quarter that follows the compliance date and at the end of each subsequent quarter (or earlier if the LRAA calculated based on fewer than four quarters of data would cause the MCL to be exceeded regardless of the monitoring results of subsequent quarters). If you are required to conduct monitoring at a frequency that is less than quarterly, you must make compliance calculations beginning with the first compliance sample taken after the compliance date.	§141.620(c)(7)		
For the purpose of the schedule in this paragraph (c), the State may determine that the combined distribution system does not include certain consecutive systems based on factors such as receiving water from a wholesale system only on an emergency basis or receiving only a small percentage and small volume of water from a wholesale system. The State may also determine that the combined distribution system does not include certain wholesale systems based on factors such as delivering water to a consecutive system only on an emergency basis or delivering only a small percentage and small volume of water to a consecutive system.	§141.620(c)(8)		
Monitoring and compliance. Systems required to monitor quarterly. To comply with subpart V MCLs in §141.64(b)(2), you must calculate LRAAs for TTHM and HAA5 using monitoring results collected under this subpart and determine that each LRAA does not exceed the MCL. If you fail to complete four consecutive quarters of monitoring, you must calculate compliance with the MCL based on the average of the available data from the	§141.620(d)(1)		

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
most recent four quarters. If you take more than one sample per quarter at a monitoring location, you must average all samples taken in the quarter at that location to determine a quarterly average to be used in the LRAA calculation.			
Systems required to monitor yearly or less frequently. To determine compliance with subpart V MCLs in §141.64(b)(2), you must determine that each sample taken is less than the MCL. If any sample exceeds the MCL, you must comply with the requirements of §141.625. If no sample exceeds the MCL, the sample result for each monitoring location is considered the LRAA for that monitoring location.	§141.620(d)(2)		
You are in violation of the monitoring requirements for each quarter that a monitoring result would be used in calculating an LRAA if you fail to monitor.	§141.620(e)		
§141.621 ROUTINE MONITORING			
Monitoring. If you submitted an IDSE report, you must begin monitoring at the locations and months you have recommended in your IDSE report submitted under §141.605 following the schedule in §141.620(c), unless the State requires other locations or additional locations after its review. If you submitted a 40/30 certification under §141.603 or you qualified for a very small system waiver under §141.604 or you are a nontransient noncommunity water system serving <10,000, you must monitor at the location(s) and dates identified in your monitoring plan in §141.132(f), updated as required by §141.622.	§141.621(a)(1)		

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You must monitor at no fewer than the number of locations identified in this paragraph (a)(2).	§141.621(a)(2)		
If you are an undisinfected system that begins using a disinfectant other than UV light after the dates in subpart U of this part for complying with the Initial Distribution System Evaluation requirements, you must consult with the State to identify compliance monitoring locations for this subpart. You must then develop a monitoring plan under §141.622 that includes those monitoring locations.	§141.621(a)(3)		
Analytical methods. You must use an approved method listed in §141.131 for TTHM and HAA5 analyses in this subpart. Analyses must be conducted by laboratories that have received certification by EPA or the State as specified in §141.131.	§141.621(b)		
§141.622 SUBPART V MONITORING PLAN			
Subpart V monitoring plan. You must develop and implement a monitoring plan to be kept on file for State and public review. The monitoring plan must contain the elements in paragraphs (a)(1)(i) through (a)(1)(iv) of this section and be complete no later than the date you conduct your initial monitoring under this subpart.	§141.622(a)(1)		
Monitoring locations;	§141.622(a)(1)(i)		
Monitoring dates;	§141.622(a)(1)(ii)		
Compliance calculation procedures; and	§141.622(a)(1)(iii)		

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
Monitoring plans for any other systems in the combined distribution system if the State has reduced monitoring requirements under the State authority in §142.16(m).	§141.622(a)(1)(iv)		
If you were not required to submit an IDSE report under either §141.601 or §141.602, and you do not have sufficient subpart L monitoring locations to identify the required number of subpart V compliance monitoring locations indicated in §141.605(b), you must identify additional locations by alternating selection of locations representing high TTHM levels and high HAA5 levels until the required number of compliance monitoring locations have been identified. You must also provide the rationale for identifying the locations as having high levels of TTHM or HAA5. If you have more subpart L monitoring locations than required for subpart V compliance monitoring in §141.605(b), you must identify which locations you will use for subpart V compliance monitoring by alternating selection of locations representing high TTHM levels and high HAA5 levels until the required number of subpart V compliance monitoring locations have been identified.	§141.622(a)(2)		
If you are a subpart H system serving > 3,300 people, you must submit a copy of your monitoring plan to the State prior to the date you conduct your initial monitoring under this subpart, unless your IDSE report submitted under subpart U of this part contains all the information required by this section.	§141.622(b)		
You may revise your monitoring plan to reflect changes in treatment, distribution system operations and layout (including new service areas), or other factors that may affect TTHM or HAA5 formation, or for State-approved reasons, after consultation	§141.622(c)		

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
with the State regarding the need for changes and the appropriateness of changes. If you change monitoring locations, you must replace existing compliance monitoring locations with the lowest LRAA with new locations that reflect the current distribution system locations with expected high TTHM or HAA5 levels. The State may also require modifications in your monitoring plan. If you are a subpart H system serving > 3,300 people, you must submit a copy of your modified monitoring plan to the State prior to the date you are required to comply with the revised monitoring plan.			
§141.623 REDUCED MONITORING			
You may reduce monitoring to the level specified in the table in this paragraph (a) any time the LRAA is ≤0.040 mg/L for TTHM and ≤0.030 mg/L for HAA5 at all monitoring locations. You may only use data collected under the provisions of this subpart or subpart L of this part to qualify for reduced monitoring. In addition, the source water annual average TOC level, before any treatment, must be ≤4.0 mg/L at each treatment plant treating surface water or ground water under the direct influence of surface water, based on monitoring conducted under either §141.132(b)(1)(iii) or §141.132(d).	§141.623(a)		
You may remain on reduced monitoring as long as the TTHM LRAA ≤0.040 mg/L and the HAA5 LRAA ≤0.030 mg/L at each monitoring location (for systems with quarterly reduced monitoring) or each TTHM sample ≤0.060 mg/L and each HAA5 sample ≤0.045 mg/L (for systems with annual or less frequent monitoring). In addition, the source water annual average TOC	§141.623(b)		

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
level, before any treatment, must be ≤4.0 mg/L at each treatment plant treating surface water or ground water under the direct influence of surface water, based on monitoring conducted under either §141.132(b)(1)(iii) or §141.132(d).			
If the LRAA based on quarterly monitoring at any monitoring location exceeds either 0.040 mg/L for TTHM or 0.030 mg/L for HAA5 or if the annual (or less frequent) sample at any location exceeds either 0.060 mg/L for TTHM or 0.045 mg/L for HAA5, or if the source water annual average TOC level, before any treatment, >4.0 mg/L at any treatment plant treating surface water or ground water under the direct influence of surface water, you must resume routine monitoring under §141.621 or begin increased monitoring if §141.625 applies.	§141.623(c)		
The State may return your system to routine monitoring at the State's discretion.	§141.623(d)		
§141.624 ADDITIONAL REQUIREMENTS FOR CONSECUTIVE SYSTEMS			
If you are a consecutive system that does not add a disinfectant but delivers water that has been treated with a primary or residual disinfectant other than ultraviolet light, you must comply with analytical and monitoring requirements for chlorine and chloramines in §141.131 (c) and §141.132(c)(1) and the compliance requirements in §141.133(c)(1) beginning April 1, 2009, unless required earlier by the State, and report monitoring results under §141.134(c).	§141.624		

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
§141.625 CONDITIONS REQUIRING INCREASED MONITORING			
If you are required to monitor at a particular location annually or less frequently than annually under §141.621 or §141.623, you must increase monitoring to dual sample sets once per quarter (taken every 90 days) at all locations if a TTHM sample is >0.080 mg/L or a HAA5 sample is >0.060 mg/L at any location.	§141.625(a)		
You are in violation of the MCL when the LRAA exceeds the subpart V MCLs in §141.64(b)(2), calculated based on four consecutive quarters of monitoring (or the LRAA calculated based on fewer than four quarters of data if the MCL would be exceeded regardless of the monitoring results of subsequent quarters). You are in violation of the monitoring requirements for each quarter that a monitoring result would be used in calculating an LRAA if you fail to monitor.	§141.625(b)		
You may return to routine monitoring once you have conducted increased monitoring for at least four consecutive quarters and the LRAA for every monitoring location is ≤0.060 mg/L for TTHM and ≤0.045 mg/L for HAA5.	§141.625(c)		

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
§141.626 OPERATIONAL EVALUATION LEVELS			
You have exceeded the operational evaluation level at any monitoring location where the sum of the two previous quarters' TTHM results plus twice the current quarter's TTHM result, divided by 4 to determine an average, exceeds 0.080 mg/L, or where the sum of the two previous quarters' HAA5 results plus twice the current quarter's HAA5 result, divided by 4 to determine an average, exceeds 0.060 mg/L.	§141.626(a)		
If you exceed the operational evaluation level, you must conduct an operational evaluation and submit a written report of the evaluation to the State no later than 90 days after being notified of the analytical result that causes you to exceed the operational evaluation level. The written report must be made available to the public upon request.	§141.626(b)(1)		
Your operational evaluation must include an examination of system treatment and distribution operational practices, including storage tank operations, excess storage capacity, distribution system flushing, changes in sources or source water quality, and treatment changes or problems that may contribute to TTHM and HAA5 formation and what steps could be considered to minimize future exceedences.	§141.626(b)(2)		
You may request and the State may allow you to limit the scope of your evaluation if you are able to identify the cause of the operational evaluation level exceedance.	§141.626(b)(2)(i)		

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
Your request to limit the scope of the evaluation does not extend the schedule in paragraph (b)(1) of this section for submitting the written report. The State must approve this limited scope of evaluation in writing and you must keep that approval with the completed report.	§141.626(b)(2)(ii)		
§141.627 REQUIREMENTS FOR REMAINING ON REDUCED TTHM AND HAA5 MONITORING BASED ON SUBPART L RESULTS			
You may remain on reduced monitoring after the dates identified in §141.620(c) for compliance with this subpart only if you qualify for a 40/30 certification under §141.603 or have received a very small system waiver under §141.604, plus you meet the reduced monitoring criteria in §141.623(a), and you do not change or add monitoring locations from those used for compliance monitoring under subpart L of this part. If your monitoring locations under this subpart differ from your monitoring locations under subpart L of this part, you may not remain on reduced monitoring after the dates identified in §141.620(c) for compliance with this subpart.	§141.627		
§141.628 REQUIREMENTS FOR REMAINING ON INCREASED TTHM AND HAA5 MONITORING BASED ON SUBPART L RESULTS			
If you were on increased monitoring under §141.132(b)(1), you must remain on increased monitoring until you qualify for a return to routine monitoring under §141.625(c). You must conduct increased monitoring under §141.625 at the monitoring locations in the monitoring plan developed under §141.622 beginning at the date identified in §141.620(c) for compliance with this subpart and remain on increased monitoring until you qualify for a return to routine monitoring under §141.625(c).	§141.628		

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
§141.629 REPORTING AND RECORDKEEPING REQUIREMENTS			
Reporting. You must report the following information for each monitoring location to the State within 10 days of the end of any quarter in which monitoring is required:	§141.629(a)(1)		
Number of samples taken during the last quarter.	§141.629(a)(1)(i)		
Date and results of each sample taken during the last quarter.	§141.629(a)(1)(ii)		
Arithmetic average of quarterly results for the last four quarters for each monitoring location (LRAA), beginning at the end of the fourth calendar quarter that follows the compliance date and at the end of each subsequent quarter. If the LRAA calculated based on fewer than four quarters of data would cause the MCL to be exceeded regardless of the monitoring results of subsequent quarters, you must report this information to the State as part of the first report due following the compliance date or anytime thereafter that this determination is made. If you are required to conduct monitoring at a frequency that is less than quarterly, you must make compliance calculations beginning with the first compliance sample taken after the compliance date, unless you are required to conduct increased monitoring under §141.625.	§141.629(a)(1)(iii)		
Whether, based on §141.64(b)(2) and this subpart, the MCL was violated at any monitoring location.	§141.629(a)(1)(iv)		
Any operational evaluation levels that were exceeded during the quarter and, if so, the location and date, and the calculated TTHM and HAA5 levels.	§141.629(a)(1)(v)		

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	STATE CITATION (DOCUMENT TITLE, PAGE NUMBER, SECTION/PARAGRAPH)	DIFFERENT FROM FED. REQUIREMENT? (EXPLAIN ON SEPARATE SHEET)
If you are a subpart H system seeking to qualify for or remain on reduced TTHM/HAA5 monitoring, you must report the following source water TOC information for each treatment plant that treats surface water or ground water under the direct influence of surface water to the State within 10 days of the end of any quarter in which monitoring is required:	§141.629(a)(2)		
The number of source water TOC samples taken each month during last quarter.	§141.629(a)(2)(i)		
The date and result of each sample taken during last quarter.	§141.629(a)(2)(ii)		
The quarterly average of monthly samples taken during last quarter or the result of the quarterly sample.	§141.629(a)(2)(iii)		
The running annual average (RAA) of quarterly averages from the past four quarters.	§141.629(a)(2)(iv)		
Whether the RAA exceeded 4.0 mg/L.	§141.629(a)(2)(v)		
The State may choose to perform calculations and determine whether the MCL was exceeded or the system is eligible for reduced monitoring in lieu of having the system report that information	§141.629(a)(3)		
Recordkeeping. You must retain any subpart V monitoring plans and your subpart V monitoring results as required by §141.33.	§141.629(b)		

SUMMARY OF FEDERAL REQUIREMENT	FEDERAL CITATION	EXPLANATION OF STATE POLICIES AND PROCEDURES
PART 142 – NATIONAL PRIMARY DRINKING WATER REGULATIONS IMPLEMENTATION		
§142.14 RECORDS KEPT BY STATES		
Any decisions made pursuant to the provisions of 40 CFR part 141, subparts U and V of this part.	§142.14(a)(8)	
IDSE monitoring plans, plus any modifications required by the State, must be kept until replaced by approved IDSE reports.	§142.14(a)(8)(i)	
IDSE reports and 40/30 certifications, plus any modifications required by the State, must be kept until replaced or revised in their entirety.	§142.14(a)(8)(ii)	
Operational evaluations submitted by a system must be kept for 10 years following submission.	§142.14(a)(8)(iii)	
§142.16 SPECIAL PRIMACY CONDITIONS		
Requirements for States to adopt 40 CFR part 141, subparts U and V. In addition to the general primacy requirements elsewhere in this part, including the requirements that State regulations be at least as stringent as federal requirements, an application for approval of a State program revision that adopts 40 CFR part 141, subparts U and V, must contain a description of how the State will implement a procedure for addressing modification of wholesale system and consecutive system monitoring on a case-by-case basis for part 141 subpart V outside the provisions of §141.29 of this chapter, if the State elects to use such an authority. The procedure must ensure that all systems have at least one compliance monitoring location.	§142.16(m)	

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Appendix B
Rule Requirements

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List of Subjects

40 CFR Part 9

Reporting and recordkeeping requirements.

40 CFR Part 141

Environmental protection, Chemicals, Indians-lands, Incorporation by reference, Intergovernmental relations, Radiation protection, Reporting and recordkeeping requirements, Water supply.

40 CFR Part 142

Environmental protection, Administrative practice and procedure, Chemicals, Indians-lands, Radiation protection, Reporting and recordkeeping requirements, Water supply.

Dated: December 15, 2005.

Stephen L. Johnson,

Administrator.

■ For the reasons set forth in the preamble, title 40 chapter I of the Code of Federal Regulations is amended as follows:

PART 9—OMB APPROVALS UNDER THE PAPERWORK REDUCTION ACT

■ 1. The authority citation for part 9 continues to read as follows:

Authority: 7 U.S.C. 135 *et seq.*, 136–136y; 15 U.S.C. 2001, 2003, 2005, 2006, 2601–2671; 21 U.S.C. 331j, 346a, 348; 31 U.S.C. 9701; 33 U.S.C. 1251 *et seq.*, 1311, 1313d, 1314, 1318, 1321, 1326, 1330, 1342, 1344, 1345 (d) and (e), 1361; Executive Order 11735, 38 FR 21243, 3 CFR, 1971–1975 Comp. p. 973; 42 U.S.C. 241, 242b, 243, 246, 300f, 300g, 300g–1, 300g–2, 300g–3, 300g–4, 300g–5, 300g–6, 300j–1, 300j–2, 300j–3, 300j–4, 300j–9, 1857 *et seq.*, 6901–6992k, 7401–7671q, 7542, 9601–9657, 11023, 11048.

■ 2. In § 9.1 the table is amended as follows:

■ a. Under the heading ''National Primary Drinking Water Regulations Implementation'' by adding entries in numerical order for ''§ 141.600–141.605, 141.620–141.626, 141.629''.

■ b. Under the heading ''National Primary Drinking Water Regulations Implementation'' by removing entries ''§ 142.14(a),142.14(a)–(d)(3)'' and adding entries in numerical order for ''142.14(a) (1)–(7), 142.14(a)(8), 142.14(b)–(d) and 142.16(m)'' as follows:

§ 9.1 OMB approvals under the Paperwork Reduction Act.

* * * * *

40 CFR citation	OMB control No.
* * * * *	
National Primary Drinking Water Regulations	
* * * * *	
141.600–141.605	2040–0265
141.620–141.626	2040–0265
141.629	2040–0265
National Primary Drinking Water Regulations Implementation	
* * * * *	
142.14(a)(1)–(7)	2040–0265
142.14(a)(8)	2040–0265
142.14(b)–(d)	2040–0090
* * * * *	
142.16(m)	2040–0265

* * * * *

PART 141—NATIONAL PRIMARY DRINKING WATER REGULATIONS

■ 3. The authority citation for part 141 continues to read as follows:

Authority: 42 U.S.C. 300f, 300g–1, 300g–2, 300g–3, 300g–4, 300g–5, 300g–6, 300j–4, 300j–9, and 300j–11.

■ 4. Section 141.2 is amended by adding, in alphabetical order, definitions for ''Combined distribution system'', ''Consecutive system'', ''Dual sample sets'', ''Finished water'', ''GAC20'', ''Locational running annual average'', and ''Wholesale system'' and revising the definition of ''GAC10'' to read as follows:

§ 141.2 Definitions.

* * * * *

Combined distribution system is the interconnected distribution system consisting of the distribution systems of wholesale systems and of the consecutive systems that receive finished water.

* * * * *

Consecutive system is a public water system that receives some or all of its finished water from one or more wholesale systems. Delivery may be through a direct connection or through the distribution system of one or more consecutive systems.

* * * * *

Dual sample set is a set of two samples collected at the same time and same location, with one sample analyzed for TTHM and the other

sample analyzed for HAA5. Dual sample sets are collected for the purposes of conducting an IDSE under subpart U of this part and determining compliance with the TTHM and HAA5 MCLs under subpart V of this part.

* * * * *

Finished water is water that is introduced into the distribution system of a public water system and is intended for distribution and consumption without further treatment, except as treatment necessary to maintain water quality in the distribution system (*e.g.*, booster disinfection, addition of corrosion control chemicals).

* * * * *

GAC10 means granular activated carbon filter beds with an empty-bed contact time of 10 minutes based on average daily flow and a carbon reactivation frequency of every 180 days, except that the reactivation frequency for GAC10 used as a best available technology for compliance with subpart V MCLs under § 141.64(b)(2) shall be 120 days.

GAC20 means granular activated carbon filter beds with an empty-bed contact time of 20 minutes based on average daily flow and a carbon reactivation frequency of every 240 days.

* * * * *

Locational running annual average (LRAA) is the average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.

* * * * *

Wholesale system is a public water system that treats source water as necessary to produce finished water and then delivers some or all of that finished water to another public water system. Delivery may be through a direct connection or through the distribution system of one or more consecutive systems.

§ 141.12 [Removed]

■ 5. Section 141.12 is removed and reserved.

§ 141.30 [Removed]

■ 6. Section 141.30 is removed.

§ 141.32 [Removed]

■ 7. Section 141.32 is removed and reserved.

■ 8. Section 141.33 is amended by revising the first sentence of paragraph (a) introductory text and adding paragraph (f) to read as follows:

§ 141.33 Record maintenance.

* * * * *

(a) Records of microbiological analyses and turbidity analyses made pursuant to this part shall be kept for not less than 5 years. * * *

* * * * *

(f) Copies of monitoring plans developed pursuant to this part shall be kept for the same period of time as the records of analyses taken under the plan are required to be kept under paragraph (a) of this section, except as specified elsewhere in this part.

■ 9. Section 141.53 is amended by revising the table to read as follows:

§ 141.53 Maximum contaminant level goals for disinfection byproducts.

* * * * *

Disinfection byproduct	MCLG (mg/L)
Bromodichloromethane	zero
Bromoform	zero
Bromate	zero
Chlorite	0.8
Chloroform	0.07
Dibromochloromethane	0.06
Dichloroacetic acid	zero
Monochloroacetic acid	0.07
Trichloroacetic acid	0.02

■ 10. Section 141.64 is revised to read as follows:

§ 141.64 Maximum contaminant levels for disinfection byproducts.

(a) *Bromate and chlorite.* The maximum contaminant levels (MCLs) for bromate and chlorite are as follows:

Disinfection byproduct	MCL (mg/L)
Bromate	0.010
Chlorite	1.0

(1) *Compliance dates for CWSs and NTNCWSs.* Subpart H systems serving 10,000 or more persons must comply with this paragraph (a) beginning January 1, 2002. Subpart H systems serving fewer than 10,000 persons and systems using only ground water not under the direct influence of surface water must comply with this paragraph (a) beginning January 1, 2004.

(2) The Administrator, pursuant to section 1412 of the Act, hereby identifies the following as the best technology, treatment techniques, or other means available for achieving compliance with the maximum contaminant levels for bromate and chlorite identified in this paragraph (a):

Disinfection byproduct	Best available technology
Bromate	Control of ozone treatment process to reduce production of bromate
Chlorite	Control of treatment processes to reduce disinfectant demand and control of disinfection treatment processes to reduce disinfectant levels

(b) TTHM and HAA5. (1) Subpart L—RAA compliance. (i) Compliance dates. Subpart H systems serving 10,000 or more persons must comply with this paragraph (b)(1) beginning January 1, 2002. Subpart H systems serving fewer than 10,000 persons and systems using only ground water not under the direct influence of surface water must comply with this paragraph (b)(1) beginning January 1, 2004. All systems must comply with these MCLs until the date specified for subpart V compliance in § 141.620(c).

Disinfection byproduct	MCL (mg/L)
Total trihalomethanes (TTHM)	0.080
Haloacetic acids (five) (HAA5)	0.060

(ii) The Administrator, pursuant to section 1412 of the Act, hereby identifies the following as the best technology, treatment techniques, or other means available for achieving compliance with the maximum contaminant levels for TTHM and HAA5 identified in this paragraph (b)(1):

Disinfection byproduct	Best available technology
Total trihalomethanes (TTHM) and Haloacetic acids (five) (HAA5).	Enhanced coagulation or enhanced softening or GAC10, with chlorine as the primary and residual disinfectant

(2) Subpart V—LRAA compliance. (i) Compliance dates. The subpart V MCLs for TTHM and HAA5 must be complied with as a locational running annual average at each monitoring location beginning the date specified for subpart V compliance in § 141.620(c).

Disinfection byproduct	MCL (mg/L)
Total trihalomethanes (TTHM)	0.080
Haloacetic acids (five) (HAA5)	0.060

(ii) The Administrator, pursuant to section 1412 of the Act, hereby identifies the following as the best technology, treatment techniques, or other means available for achieving compliance with the maximum contaminant levels for TTHM and HAA5 identified in this paragraph (b)(2)

for all systems that disinfect their source water:

Disinfection by-product	Best available technology
Total trihalomethanes (TTHM) and Haloacetic acids (five) (HAA5).	Enhanced coagulation or enhanced softening, plus GAC10; or nanofiltration with a molecular weight cutoff ≤1000 Daltons; or GAC20

(iii) The Administrator, pursuant to section 1412 of the Act, hereby identifies the following as the best technology, treatment techniques, or other means available for achieving compliance with the maximum contaminant levels for TTHM and HAA5 identified in this paragraph (b)(2) for consecutive systems and applies only to the disinfected water that consecutive systems buy or otherwise receive:

Disinfection by-product	Best available technology
Total trihalomethanes (TTHM) and Haloacetic acids (five) (HAA5).	Systems serving ≥10,000: Improved distribution system and storage tank management to reduce residence time, plus the use of chloramines for disinfectant residual maintenance Systems serving <10,000: Improved distribution system and storage tank management to reduce residence time

■ 11. Section 141.131 is amended as follows:
■ a. By revising paragraph (a),
■ b. By revising paragraphs (b)(1) and (b)(2),
■ c. By revising the table in paragraph (c)(1),
■ d. By revising paragraphs (d)(2), (d)(3), (d)(4)(i), and (d)(4)(ii),
■ e. By adding paragraph (d)(6).

§ 141.131 Analytical requirements.

(a) *General.* (1) Systems must use only the analytical methods specified in this section, or their equivalent as approved by EPA, to demonstrate compliance with the requirements of this subpart and with the requirements of subparts U and V of this part. These methods are effective for compliance monitoring February 16, 1999, unless a different effective date is specified in this section or by the State.

(2) The following documents are incorporated by reference. The Director of the Federal Register approves this incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be inspected at EPA's Drinking Water Docket, 1301 Constitution Avenue, NW., EPA West, Room B102, Washington, DC 20460, or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.* EPA Method 552.1 is in Methods for the Determination of Organic Compounds in Drinking Water-Supplement II, USEPA, August 1992, EPA/600/R–92/129 (available through National Information Technical Service (NTIS), PB92–207703). EPA Methods 502.2, 524.2, 551.1, and 552.2 are in Methods for the Determination of Organic Compounds in Drinking Water-Supplement III, USEPA, August 1995, EPA/600/R–95/131 (available through NTIS, PB95–261616). EPA Method 300.0 is in Methods for the Determination of Inorganic Substances in Environmental Samples, USEPA, August 1993, EPA/600/R–93/100 (available through NTIS, PB94–121811). EPA Methods 300.1 and 321.8 are in Methods for the Determination of Organic and Inorganic Compounds in Drinking Water, Volume 1, USEPA, August 2000, EPA 815–R–00–014 (available through NTIS, PB2000–106981). EPA Method 317.0, Revision 2.0, ''Determination of Inorganic Oxyhalide Disinfection By-Products in Drinking Water Using Ion Chromatography with the Addition of a Postcolumn Reagent for Trace Bromate Analysis,'' USEPA, July 2001, EPA 815–B–01–001, EPA Method 326.0, Revision 1.0, ''Determination of Inorganic Oxyhalide Disinfection By-Products in Drinking Water Using Ion Chromatography Incorporating the Addition of a Suppressor Acidified Postcolumn Reagent for Trace Bromate Analysis,'' USEPA, June 2002, EPA 815–R–03–007, EPA Method 327.0, Revision 1.1, ''Determination of Chlorine Dioxide and Chlorite Ion in Drinking Water Using Lissamine Green B and Horseradish Peroxidase with Detection by Visible Spectrophotometry,'' USEPA, May 2005, EPA 815–R–05–008 and EPA Method 552.3, Revision 1.0, ''Determination of Haloacetic Acids and Dalapon in Drinking Water by Liquid-liquid Microextraction, Derivatization, and Gas Chromatography with Electron Capture Detection,'' USEPA, July 2003, EPA–815–B–03–002 can be accessed and downloaded directly on-line at *http://www.epa.gov/safewater/methods/sourcalt.html.* EPA Method 415.3, Revision 1.1, ''Determination of Total Organic Carbon and Specific UV Absorbance at 254 nm in Source Water and Drinking Water,'' USEPA, February 2005, EPA/600/R–05/055 can be accessed and downloaded directly on-line at *www.epa.gov/nerlcwww/ordmeth.htm.* Standard Methods 4500–Cl D, 4500–Cl E, 4500–Cl F, 4500–Cl G, 4500–Cl H, 4500–Cl I, 4500–ClO_2 D, 4500–ClO_2 E, 6251 B, and 5910 B shall be followed in accordance with Standard Methods for the Examination of Water and Wastewater, 19th or 20th Editions, American Public Health Association, 1995 and 1998, respectively. The cited methods published in either edition may be used. Standard Methods 5310 B, 5310 C, and 5310 D shall be followed in accordance with the Supplement to the 19th Edition of Standard Methods for the Examination of Water and Wastewater, or the Standard Methods for the Examination of Water and Wastewater, 20th Edition, American Public Health Association, 1996 and 1998, respectively. The cited methods published in either edition may be used. Copies may be obtained from the American Public Health Association, 1015 Fifteenth Street, NW., Washington, DC 20005. Standard Methods 4500–Cl D–00, 4500–Cl E–00, 4500–Cl F–00, 4500–Cl G–00, 4500–Cl H–00, 4500–Cl I–00, 4500–ClO_2 E–00, 6251 B–94, 5310 B–00, 5310 C–00, 5310 D–00 and 5910 B–00 are available at *http://www.standardmethods.org* or at EPA's Water Docket. The year in which each method was approved by the Standard Methods Committee is designated by the last two digits in the method number. The methods listed are the only Online versions that are IBR-approved. ASTM Methods D 1253–86 and D 1253–86 (Reapproved 1996) shall be followed in accordance with the Annual Book of ASTM Standards, Volume 11.01, American Society for Testing and Materials International, 1996 or any ASTM edition containing the IBR-approved version of the method may be used. ASTM Method D1253–03 shall be followed in accordance with the Annual Book of ASTM Standards, Volume 11.01, American Society for Testing and Materials International, 2004 or any ASTM edition containing the IBR-approved version of the method may be used. ASTM Method D 6581–00 shall be followed in accordance with the Annual Book of ASTM Standards, Volume 11.01, American Society for Testing and Materials International, 2001 or any ASTM edition containing the IBR-approved version of the method may be used; copies may be obtained from the American Society for Testing and

Materials International, 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959.

(b) Disinfection byproducts. (1) Systems must measure disinfection byproducts by the methods (as modified by the footnotes) listed in the following table:

APPROVED METHODS FOR DISINFECTION BYPRODUCT COMPLIANCE MONITORING

Contaminant and methodology [1]	EPA method	Standard method [2]	SM online [9]	ASTM method [3]
TTHM				
P&T/GC/EICD & PID	502.2 [4]			
P&T/GC/MS	524.2			
LLE/GC/ECD	551.1			
HAA5				
LLE (diazomethane)/GC/ECD		6251 B [5]	6251 B–94	
SPE (acidic methanol)/GC/ECD	552.1 [5]			
LLE (acidic methanol)/GC/ECD	552.2, 552.3			
Bromate				
Ion chromatography	300.1			D 6581–00
Ion chromatography & post column reaction.	317.0 Rev 2.0 [6], 326.0 [6]			
IC/ICP–MS	321.8 [6 7]			
Chlorite				
Amperometric titration		4500–ClO_2 E [8]	4500–ClO_2 E–00 [8]	
Spectrophotometry	327.0 Rev 1.1 [8]			
Ion chromatography	300.0, 300.1, 317.0 Rev 2.0, 326.0.			D 6581–00

[1] P&T = purge and trap; GC = gas chromatography; EICD = electrolytic conductivity detector; PID = photoionization detector; MS = mass spectrometer; LLE = liquid/liquid extraction; ECD = electron capture detector; SPE = solid phase extraction; IC = ion chromatography; ICP–MS = inductively coupled plasma/mass spectrometer.

[2] 19th and 20th editions of Standard Methods for the Examination of Water and Wastewater, 1995 and 1998, respectively, American Public Health Association; either of these editions may be used.

[3] Annual Book of ASTM Standards, 2001 or any year containing the cited version of the method, Vol 11.01.

[4] If TTHMs are the only analytes being measured in the sample, then a PID is not required.

[5] The samples must be extracted within 14 days of sample collection.

[6] Ion chromatography & post column reaction or IC/ICP-MS must be used for monitoring of bromate for purposes of demonstrating eligibility of reduced monitoring, as prescribed in § 141.132(b)(3)(ii).

[7] Samples must be preserved at the time of sampling with 50 mg ethylenediamine (EDA)/L of sample and must be analyzed within 28 days.

[8] Amperometric titration or spectrophotometry may be used for routine daily monitoring of chlorite at the entrance to the distribution system, as prescribed in § 141.132(b)(2)(i)(A). Ion chromatography must be used for routine monthly monitoring of chlorite and additional monitoring of chlorite in the distribution system, as prescribed in § 141.132(b)(2)(i)(B) and (b)(2)(ii).

[9] The Standard Methods Online version that is approved is indicated by the last two digits in the method number which is the year of approval by the Standard Method Committee. Standard Methods Online are available at *http://www.standardmethods.org.*

(2) Analyses under this section for disinfection byproducts must be conducted by laboratories that have received certification by EPA or the State, except as specified under paragraph (b)(3) of this section. To receive certification to conduct analyses for the DBP contaminants in §§ 141.64, 141.135, and subparts U and V of this part, the laboratory must:

(i) Analyze Performance Evaluation (PE) samples that are acceptable to EPA or the State at least once during each consecutive 12 month period by each method for which the laboratory desires certification.

(ii) Until March 31, 2007, in these analyses of PE samples, the laboratory must achieve quantitative results within the acceptance limit on a minimum of 80% of the analytes included in each PE sample. The acceptance limit is defined as the 95% confidence interval calculated around the mean of the PE study between a maximum and minimum acceptance limit of +/− 50% and +/− 15% of the study mean.

(iii) Beginning April 1, 2007, the laboratory must achieve quantitative results on the PE sample analyses that are within the following acceptance limits:

DBP	Acceptance limits (percent of true value)	Comments
TTHM		
Chloroform	±20	Laboratory must meet all 4 individual THM acceptance limits in order to successfully pass a PE sample for TTHM
Bromodichloromethane	±20	
Dibromochloromethane	±20	
Bromoform	±20	
HAA5		
Monochloroacetic Acid	±40	Laboratory must meet the acceptance limits for 4 out of 5 of the HAA5 compounds in order to successfully pass a PE sample for HAA5
Dichloroacetic Acid	±40	
Trichloroacetic Acid	±40	
Monobromoacetic Acid	±40	
Dibromoacetic Acid	±40	
Chlorite	±30	

DBP	Acceptance limits (percent of true value)	Comments
Bromate	±30	

(iv) Beginning April 1, 2007, report quantitative data for concentrations at least as low as the ones listed in the following table for all DBP samples analyzed for compliance with §§ 141.64, 141.135, and subparts U and V of this part:

DBP	Minimum reporting level (mg/L) [1]	Comments
TTHM [2]		
Chloroform	0.0010	
Bromodichloromethane	0.0010	
Dibromochloromethane	0.0010	
Bromoform	0.0010	
HAA5 [2]		
Monochloroacetic Acid	0.0020	
Dichloroacetic Acid	0.0010	
Trichloroacetic Acid	0.0010	
Monobromoacetic Acid	0.0010	
Dibromoacetic Acid	0.0010	
Chlorite	0.020	Applicable to monitoring as prescribed in § 141.132(b)(2)(1)(B) and (b)(2)(ii).
Bromate	0.0050 or 0.0010	Laboratories that use EPA Methods 317.0 Revision 2.0, 326.0 or 321.8 must meet a 0.0010 mg/L MRL for bromate.

[1] The calibration curve must encompass the regulatory minimum reporting level (MRL) concentration. Data may be reported for concentrations lower than the regulatory MRL as long as the precision and accuracy criteria are met by analyzing an MRL check standard at the lowest reporting limit chosen by the laboratory. The laboratory must verify the accuracy of the calibration curve at the MRL concentration by analyzing an MRL check standard with a concentration less than or equal to 110% of the MRL with each batch of samples. The measured concentration for the MRL check standard must be ±50% of the expected value, if any field sample in the batch has a concentration less than 5 times the regulatory MRL. Method requirements to analyze higher concentration check standards and meet tighter acceptance criteria for them must be met in addition to the MRL check standard requirement.

[2] When adding the individual trihalomethane or haloacetic acid concentrations to calculate the TTHM or HAA5 concentrations, respectively, a zero is used for any analytical result that is less than the MRL concentration for that DBP, unless otherwise specified by the State.

* * * * *

(c) * * *

(1) * * *

Methodology	SM (19th or 20th ed)	SM Online [2]	ASTM method	EPA method	Residual measured [1]			
					Free Cl_2	Combined Cl_2	Total Cl_2	ClO_2
Amperometric Titration	4500–C D	4500–C D–00	D 1253–86 (96), 03		X	X	X	
Low Level Amperometric Titration.	4500–C E	4500–C E–00					X	
DPD Ferrous Titrimetric	4500–C F	4500–C F–00			X	X	X	
DPD Colorimetric	4500–C G	4500–C G–00			X	X	X	
Syringaldazine (FACTS)	4500–C H	4500–C H–00			X			
Iodometric Electrode	4500–C I	4500–C I–00					X	
DPD	4500–C O_2 D							X
Amperometric Method II	4500–C O_2 E	4500–C O_2 E–00						X
Lissamine Green Spectrophotometric.				327.0 Rev 1.1				X

[1] X indicates method is approved for measuring specified disinfectant residual. Free chlorine or total chlorine may be measured for demonstrating compliance with the chlorine MRDL and combined chlorine, or total chlorine may be measured for demonstrating compliance with the chloramine MRDL.

[2] The Standard Methods Online version that is approved is indicated by the last two digits in the method number which is the year of approval by the Standard Method Committee. Standard Methods Online are available at *http://www.standardmethods.org.*

* * * * *

(d) * * *

(2) *Bromide.* EPA Methods 300.0, 300.1, 317.0 Revision 2.0, 326.0, or ASTM D 6581–00.

(3) *Total Organic Carbon (TOC).* Standard Method 5310 B or 5310 B–00 (High-Temperature Combustion

Method) or Standard Method 5310 C or 5310 C–00 (Persulfate-Ultraviolet or Heated-Persulfate Oxidation Method) or Standard Method 5310 D or 5310 D–00 (Wet-Oxidation Method) or EPA Method 415.3 Revision 1.1. Inorganic carbon must be removed from the samples prior to analysis. TOC samples may not be filtered prior to analysis. TOC samples must be acidified at the time of sample collection to achieve pH less than or equal to 2 with minimal addition of the acid specified in the method or by the instrument manufacturer. Acidified TOC samples must be analyzed within 28 days.

(4) * * *

(i) Dissolved Organic Carbon (DOC). Standard Method 5310 B or 5310 B–00 (High-Temperature Combustion Method) or Standard Method 5310 C or 5310 C–00 (Persulfate-Ultraviolet or Heated-Persulfate Oxidation Method) or Standard Method 5310 D or 5310 D–00 (Wet-Oxidation Method) or EPA Method 415.3 Revision 1.1. DOC samples must be filtered through the 0.45 μm pore-diameter filter as soon as practical after sampling, not to exceed 48 hours. After filtration, DOC samples must be acidified to achieve pH less than or equal to 2 with minimal addition of the acid specified in the method or by the instrument manufacturer. Acidified DOC samples must be analyzed within 28 days of sample collection. Inorganic carbon must be removed from the samples prior to analysis. Water passed through the filter prior to filtration of the sample must serve as the filtered blank. This filtered blank must be analyzed using procedures identical to those used for analysis of the samples and must meet the following criteria: DOC < 0.5 mg/L.

(ii) Ultraviolet Absorption at 254 nm (UV_{254}). Standard Method 5910 B or 5910 B–00 (Ultraviolet Absorption Method) or EPA Method 415.3 Revision 1.1. UV absorption must be measured at 253.7 nm (may be rounded off to 254 nm). Prior to analysis, UV_{254} samples must be filtered through a 0.45 μm pore-diameter filter. The pH of UV_{254} samples may not be adjusted. Samples must be analyzed as soon as practical after sampling, not to exceed 48 hours.

* * * * *

(6) *Magnesium.* All methods allowed in § 141.23(k)(1) for measuring magnesium.

■ 12. Section 141.132 is amended by:

■ a. Redesignating paragraphs (b)(1)(iii) through (b)(1)(v) as paragraphs (b)(1)(iv) through (b)(1)(vi);

■ b. Adding a new paragraph (b)(1)(iii);

■ c. Revising newly redesignated paragraph (b)(1)(iv); and

■ d. Revising paragraph (b)(3)(ii).

The addition and revisions read as follows:

§ 141.132 Monitoring requirements.

* * * * *

(b) * * *

(1) * * *

(iii) *Monitoring requirements for source water TOC.* In order to qualify for reduced monitoring for TTHM and HAA5 under paragraph (b)(1)(ii) of this section, subpart H systems not monitoring under the provisions of paragraph (d) of this section must take monthly TOC samples every 30 days at a location prior to any treatment, beginning April 1, 2008 or earlier, if specified by the State. In addition to meeting other criteria for reduced monitoring in paragraph (b)(1)(ii) of this section, the source water TOC running annual average must be ≤4.0 mg/L (based on the most recent four quarters of monitoring) on a continuing basis at each treatment plant to reduce or remain on reduced monitoring for TTHM and HAA5. Once qualified for reduced monitoring for TTHM and HAA5 under paragraph (b)(1)(ii) of this section, a system may reduce source water TOC monitoring to quarterly TOC samples taken every 90 days at a location prior to any treatment.

(iv) Systems on a reduced monitoring schedule may remain on that reduced schedule as long as the average of all samples taken in the year (for systems which must monitor quarterly) or the result of the sample (for systems which must monitor no more frequently than annually) is no more than 0.060 mg/L and 0.045 mg/L for TTHMs and HAA5, respectively. Systems that do not meet these levels must resume monitoring at the frequency identified in paragraph (b)(1)(i) of this section (minimum monitoring frequency column) in the quarter immediately following the monitoring period in which the system exceeds 0.060 mg/L or 0.045 mg/L for TTHMs and HAA5, respectively. For systems using only ground water not under the direct influence of surface water and serving fewer than 10,000 persons, if either the TTHM annual average is >0.080 mg/L or the HAA5 annual average is >0.060 mg/L, the system must go to the increased monitoring identified in paragraph (b)(1)(i) of this section (sample location column) in the quarter immediately following the monitoring period in which the system exceeds 0.080 mg/L or 0.060 mg/L for TTHMs or HAA5 respectively.

* * * * *

(3) ***

(i) ***

(ii) Reduced monitoring.

(A) Until March 31, 2009, systems required to analyze for bromate may reduce monitoring from monthly to quarterly, if the system's average source water bromide concentration is less than 0.05 mg/L based on representative monthly bromide measurements for one year. The system may remain on reduced bromate monitoring until the running annual average source water bromide concentration, computed quarterly, is equal to or greater than 0.05 mg/L based on representative monthly measurements. If the running annual average source water bromide concentration is ≥0.05 mg/L, the system must resume routine monitoring required by paragraph (b)(3)(i) of this section in the following month.

(B) Beginning April 1, 2009, systems may no longer use the provisions of paragraph (b)(3)(ii)(A) of this section to qualify for reduced monitoring. A system required to analyze for bromate may reduce monitoring from monthly to quarterly, if the system's running annual average bromate concentration is ≤0.0025 mg/L based on monthly bromate measurements under paragraph (b)(3)(i) of this section for the most recent four quarters, with samples analyzed using Method 317.0 Revision 2.0, 326.0 or 321.8. If a system has qualified for reduced bromate monitoring under paragraph (b)(3)(ii)(A) of this section, that system may remain on reduced monitoring as long as the running annual average of quarterly bromate samples ≤0.0025 mg/L based on samples analyzed using Method 317.0 Revision 2.0, 326.0, or 321.8. If the running annual average bromate concentration is >0.0025 mg/L, the system must resume routine monitoring required by paragraph (b)(3)(i) of this section.

* * * * *

§ 141.133 [Amended]

■ 13. Section 141.133 is amended in the last sentence of paragraph (d) by revising the reference ''§ 141.32'' to read ''subpart Q of this part''.

■ 14. Section 141.135 is amended by revising paragraph (a)(3)(ii) to read as follows:

§ 141.135 Treatment technique for control of disinfection byproduct (DBP) precursors.

(a) * * *

(3) * * *

(ii) Softening that results in removing at least 10 mg/L of magnesium hardness (as $CaCO_3$), measured monthly according to § 141.131(d)(6) and calculated quarterly as a running annual average.

* * * * *

■ 15. Section 141.151 is amended by revising paragraph (d) to read as follows:

§ 141.151 Purpose and applicability of this subpart.

* * * * *

(d) For the purpose of this subpart, detected means: at or above the levels prescribed by § 141.23(a)(4) for inorganic contaminants, at or above the levels prescribed by § 141.24(f)(7) for the contaminants listed in § 141.61(a), at or above the levels prescribed by § 141.24(h)(18) for the contaminants listed in § 141.61(c), at or above the levels prescribed by § 141.131(b)(2)(iv) for the contaminants or contaminant groups listed in § 141.64, and at or above the levels prescribed by § 141.25(c) for radioactive contaminants.

* * * * *

■ 16. Section 141.153 is amended by revising paragraphs (d)(4)(iv)(B) and (d)(4)(iv)(C) to read as follows:

§ 141.153 Content of the reports.

* * * * *

(d) * * *

(4) * * *

(iv) * * *

(B) When compliance with the MCL is determined by calculating a running annual average of all samples taken at a monitoring location: the highest average of any of the monitoring locations and the range of all monitoring locations expressed in the same units as the MCL. For the MCLs for TTHM and HAA5 in § 141.64(b)(2), systems must include the highest locational running annual average for TTHM and HAA5 and the range of individual sample results for all monitoring locations expressed in the same units as the MCL. If more than one location exceeds the TTHM or HAA5 MCL, the system must include the locational running annual averages for all locations that exceed the MCL.

(C) When compliance with the MCL is determined on a system-wide basis by calculating a running annual average of all samples at all monitoring locations: the average and range of detection expressed in the same units as the MCL. The system is required to include individual sample results for the IDSE conducted under subpart U of this part when determining the range of TTHM and HAA5 results to be reported in the annual consumer confidence report for the calendar year that the IDSE samples were taken.

* * * * *

Appendix A to Subpart Q [Amended]

■ 17. In Subpart Q, Appendix A is amended as follows:

■ a. In entry I.B.2. in the fifth column, remove the endnote citation ''9'' and add in its place ''11'';

■ b. In entry I.B.11. in the fourth column, remove the endnote citation ''10'' and add in its place ''12'';

■ c. In entry I.B.12. in the fourth column, remove the endnote citation ''10'' and add in its place ''12'';

■ d. In entry I.G. in the first column, remove the endnote citation ''11'' and add in its place ''13'';

■ e. In entry I.G.1. in the third column, remove the endnote citation ''12'' and add in its place ''14'' and remove the citation in the third column ''141.12, 141.64(a)'' and in its place add ''141.64(b)'' (keeping the endnote citation to endnote 14) and in the fifth column remove the citation ''141.30'' and add in numerical order the citations ''141.600–141.605, 141.620–141.629'';

■ f. In entry I.G.2. revise the entry ''141.64(a)'' to read ''141.64(b)'' and in the fifth column add in numerical order the citations ''141.600–141.605, 141.620–141.629''.

■ g. In entry I.G.7. in the fourth column, remove the endnote citation ''13'' and add in its place ''15'';

■ h. In entry I.G.8. in the second column, remove the endnote citation ''14'' and add in its place ''16'';

■ i. In entry II. in the first column, remove the endnote citation ''15'' and add in its place ''17'';

■ j. In entry III.A. in the third column, remove the endnote citation ''16'' and add in its place ''18'';

■ k. In entry III.B in the third column, remove the endnote citation ''17'' and add in its place ''19'';

■ l. In entry IV.E. in the first column, remove the endnote citation ''18'' and add in its place 20''; and

■ m. In entry III.F in the second column, remove the endnote citation ''19'' and add in its place ''21''.

■ 18. In Subpart Q, Appendix A, remove endnote 14 and add in its place, to read as follows: ''14.§§ 141.64(b)(1) 141.132(a)–(b) apply until §§ 141.620–141.630 take effect under the schedule in § 141.620(c).

■ 19–20. In Subpart Q, Appendix B is amended as follows:

■ a. In entry G.77. in the third column, remove the endnote citation ''16'' and add in its place ''17'';

■ b. In entry H. (the title) in the first column, remove the endnote citation ''17'' and add in its place ''18'';

■ c. In entry H.80. in the third column, remove the endnote citations ''17, 18'' and add in its place ''19, 20'' and remove the number ''0.10/'';

■ d. In entry H.81. in the third column, remove the endnote citation ''20'' and add in its place ''21''; and

■ e. In entry H.84. in the second column, remove the endnote citation ''21'' and add in its place ''22'' and in the third column remove the endnote citation ''22'' and add in its place ''23''.

■ f. Revise endnotes 18 and 19.

The revisions read as follows:

Appendix B to Subpart Q

* * * * *

■ 18. Surface water systems and ground water systems under the direct influence of surface water are regulated under subpart H of 40 CFR 141. Subpart H community and non-transient non-community systems serving ≥10,000 must comply with subpart L DBP MCLs and disinfectant maximum residual disinfectant levels (MRDLs) beginning January 1, 2002. All other community and non-transient non-community systems must comply with subpart L DBP MCLs and disinfectant MRDLs beginning January 1, 2004. Subpart H transient non-community systems serving ≥10,000 that use chlorine dioxide as a disinfectant or oxidant must comply with the chlorine dioxide MRDL beginning January 1, 2002. All other transient non-community systems that use chlorine dioxide as a disinfectant or oxidant must comply with the chlorine dioxide MRDL beginning January 1, 2004.

■ 19. Community and non-transient non-community systems must comply with subpart V TTHM and HAA5 MCLs of 0.080 mg/L and 0.060 mg/L, respectively (with compliance calculated as a locational running annual average) on the schedule in § 141.620.

* * * * *

■ 21. Part 141 is amended by adding new subpart U to read as follows:

Subpart U—Initial Distribution System Evaluations

141.600 General requirements.
141.601 Standard monitoring.
141.602 System specific studies.
141.603 40/30 certification.
141.604 Very small system waivers.
141.605 Subpart V compliance monitoring location recommendations.

Subpart U—Initial Distribution System Evaluations

§ 141.600 General requirements.

(a) The requirements of subpart U of this part constitute national primary drinking water regulations. The regulations in this subpart establish monitoring and other requirements for identifying subpart V compliance monitoring locations for determining compliance with maximum contaminant levels for total

trihalomethanes (TTHM) and haloacetic acids (five)(HAA5). You must use an Initial Distribution System Evaluation (IDSE) to determine locations with representative high TTHM and HAA5 concentrations throughout your distribution system. IDSEs are used in conjunction with, but separate from, subpart L compliance monitoring, to identify and select subpart V compliance monitoring locations.

(b) *Applicability.* You are subject to these requirements if your system is a community water system that uses a primary or residual disinfectant other than ultraviolet light or delivers water that has been treated with a primary or residual disinfectant other than ultraviolet light; or if your system is a nontransient noncommunity water system that serves at least 10,000 people and uses a primary or residual disinfectant other than ultraviolet light or delivers water that has been treated with a primary or residual disinfectant other than ultraviolet light.

(c) *Schedule.* (1) You must comply with the requirements of this subpart on the schedule in the table in this paragraph (c)(1).

If you serve this population	You must submit your standard monitoring plan or system specific study plan [1] or 40/30 certification [2] to the State by or receive very small system waiver from State	You must complete your standard monitoring or system specific study by	You must submit your IDSE report to the State by [3]
Systems that are not part of a combined distribution system and systems that serve the largest population in the combined distribution system			
(i) ≥100,000	October 1, 2006	September 30, 2008	January 1, 2009.
(ii) 50,000–99,999	April 1, 2007	March 31, 2009	July 1, 2009.
(iii) 10,000–49,999	October 1, 2007	September 30, 2009	January 1, 2010.
(iv) <10,000 (CWS Only).	April 1, 2008	March 31, 2010	July 1, 2010.
Other systems that are part of a combined distribution system			
(v) Wholesale system or consecutive system.	—at the same time as the system with the earliest compliance date in the combined distribution system.	—at the same time as the system with the earliest compliance date in the combined distribution system.	—at the same time as the system with the earliest compliance date in the combined distribution system.

[1] If, within 12 months after the date identified in this column, the State does not approve your plan or notify you that it has not yet completed its review, you may consider the plan that you submitted as approved. You must implement that plan and you must complete standard monitoring or a system specific study no later than the date identified in the third column.

[2] You must submit your 40/30 certification under § 141.603 by the date indicated.

[3] If, within three months after the date identified in this column (nine months after the date identified in this column if you must comply on the schedule in paragraph (c)(1)(iii) of this section), the State does not approve your IDSE report or notify you that it has not yet completed its review, you may consider the report that you submitted as approved and you must implement the recommended subpart V monitoring as required.

(2) For the purpose of the schedule in paragraph (c)(1) of this section, the State may determine that the combined distribution system does not include certain consecutive systems based on factors such as receiving water from a wholesale system only on an emergency basis or receiving only a small percentage and small volume of water from a wholesale system. The State may also determine that the combined distribution system does not include certain wholesale systems based on factors such as delivering water to a consecutive system only on an emergency basis or delivering only a small percentage and small volume of water to a consecutive system.

(d) You must conduct standard monitoring that meets the requirements in § 141.601, or a system specific study that meets the requirements in § 141.602, or certify to the State that you meet 40/30 certification criteria under § 141.603, or qualify for a very small system waiver under § 141.604.

(1) You must have taken the full complement of routine TTHM and HAA5 compliance samples required of a system with your population and source water under subpart L of this part (or you must have taken the full complement of reduced TTHM and HAA5 compliance samples required of a system with your population and source water under subpart L if you meet reduced monitoring criteria under subpart L of this part) during the period specified in § 141.603(a) to meet the 40/30 certification criteria in § 141.603. You must have taken TTHM and HAA5 samples under §§ 141.131 and 141.132 to be eligible for the very small system waiver in § 141.604.

(2) If you have not taken the required samples, you must conduct standard monitoring that meets the requirements in § 141.601, or a system specific study that meets the requirements in § 141.602.

(e) You must use only the analytical methods specified in § 141.131, or otherwise approved by EPA for monitoring under this subpart, to demonstrate compliance with the requirements of this subpart.

(f) IDSE results will not be used for the purpose of determining compliance with MCLs in § 141.64.

§ 141.601 Standard monitoring.

(a) *Standard monitoring plan.* Your standard monitoring plan must comply with paragraphs (a)(1) through (a)(4) of this section. You must prepare and submit your standard monitoring plan to the State according to the schedule in § 141.600(c).

(1) Your standard monitoring plan must include a schematic of your distribution system (including distribution system entry points and their sources, and storage facilities), with notes indicating locations and dates of all projected standard monitoring, and all projected subpart L compliance monitoring.

(2) Your standard monitoring plan must include justification of standard monitoring location selection and a summary of data you relied on to justify standard monitoring location selection.

(3) Your standard monitoring plan must specify the population served and system type (subpart H or ground water).

(4) You must retain a complete copy of your standard monitoring plan submitted under this paragraph (a), including any State modification of your standard monitoring plan, for as long as

you are required to retain your IDSE report under paragraph (c)(4) of this section.

(b) *Standard monitoring.* (1) You must monitor as indicated in the table in this paragraph (b)(1). You must collect dual sample sets at each monitoring location. One sample in the dual sample set must be analyzed for TTHM. The other sample in the dual sample set must be analyzed for HAA5. You must conduct one monitoring period during the peak historical month for TTHM levels or HAA5 levels or the month of warmest water temperature. You must review available compliance, study, or operational data to determine the peak historical month for TTHM or HAA5 levels or warmest water temperature.

Source water type	Population size category	Monitoring periods and frequency of sampling	Distribution system monitoring locations [1]				
			Total per monitoring period	Near entry points	Average residence time	High TTHM locations	High HAA5 locations
Subpart H							
	<500 consecutive systems	one (during peak historical month) [2].	2	1		1	
	<500 non-consecutive systems		2			1	1
	500–3,300 consecutive systems.	four (every 90 days)	2	1		1	
	500–3,300 non-consecutive systems.		2			1	1
	3,301–9,999		4		1	2	1
	10,000–49,999	six (every 60 days)	8	1	2	3	2
	50,000–249,999		16	3	4	5	4
	250,000–999,999		24	4	6	8	6
	1,000,000–4,999,999		32	6	8	10	8
	≥5,000,000		40	8	10	12	10
Ground Water							
	<500 consecutive systems	one (during peak historical month) [2].	2	1		1	
	<500 non-consecutive systems		2			1	1
	500–9,999	four (every 90 days)	2			1	1
	10,000–99,999		6	1	1	2	2
	100,000–499,999		8	1	1	3	3
	≥500,000		12	2	2	4	4

[1] A dual sample set (i.e., a TTHM and an HAA5 sample) must be taken at each monitoring location during each monitoring period.
[2] The peak historical month is the month with the highest TTHM or HAA5 levels or the warmest water temperature.

(2) You must take samples at locations other than the existing subpart L monitoring locations. Monitoring locations must be distributed throughout the distribution system.

(3) If the number of entry points to the distribution system is fewer than the specified number of entry point monitoring locations, excess entry point samples must be replaced equally at high TTHM and HAA5 locations. If there is an odd extra location number, you must take a sample at a high TTHM location. If the number of entry points to the distribution system is more than the specified number of entry point monitoring locations, you must take samples at entry points to the distribution system having the highest annual water flows.

(4) Your monitoring under this paragraph (b) may not be reduced under the provisions of § 141.29 and the State may not reduce your monitoring using the provisions of § 142.16(m).

(c) *IDSE report.* Your IDSE report must include the elements required in paragraphs (c)(1) through (c)(4) of this section. You must submit your IDSE report to the State according to the schedule in § 141.600(c).

(1) Your IDSE report must include all TTHM and HAA5 analytical results from subpart L compliance monitoring and all standard monitoring conducted during the period of the IDSE as individual analytical results and LRAAs presented in a tabular or spreadsheet format acceptable to the State. If changed from your standard monitoring plan submitted under paragraph (a) of this section, your report must also include a schematic of your distribution system, the population served, and system type (subpart H or ground water).

(2) Your IDSE report must include an explanation of any deviations from your approved standard monitoring plan.

(3) You must recommend and justify subpart V compliance monitoring locations and timing based on the protocol in § 141.605.

(4) You must retain a complete copy of your IDSE report submitted under this section for 10 years after the date that you submitted your report. If the State modifies the subpart V monitoring requirements that you recommended in your IDSE report or if the State approves alternative monitoring locations, you must keep a copy of the State's notification on file for 10 years after the date of the State's notification. You must make the IDSE report and any State notification available for review by the State or the public.

§ 141.602 System specific studies.

(a) *System specific study plan.* Your system specific study plan must be based on either existing monitoring results as required under paragraph (a)(1) of this section or modeling as required under paragraph (a)(2) of this section. You must prepare and submit your system specific study plan to the State according to the schedule in § 141.600(c).

(1) *Existing monitoring results.* You may comply by submitting monitoring results collected before you are required to begin monitoring under § 141.600(c). The monitoring results and analysis must meet the criteria in paragraphs (a)(1)(i) and (a)(1)(ii) of this section.

(i) *Minimum requirements.* (A) TTHM and HAA5 results must be based on samples collected and analyzed in accordance with § 141.131. Samples must be collected no earlier than five years prior to the study plan submission date.

(B) The monitoring locations and frequency must meet the conditions identified in this paragraph (a)(1)(i)(B). Each location must be sampled once during the peak historical month for TTHM levels or HAA5 levels or the month of warmest water temperature for every 12 months of data submitted for that location. Monitoring results must include all subpart L compliance monitoring results plus additional monitoring results as necessary to meet minimum sample requirements.

System Type	Population size category	Number of monitoring locations	Number of samples	
			TTHM	HAA5
Subpart H:				
	<500	3	3	3
	500–3,300	3	9	9
	3,301–9,999	6	36	36
	10,000–49,999	12	72	72
	50,000–249,999	24	144	144
	250,000–999,999	36	216	216
	1,000,000–4,999,999	48	288	288
	≥ 5,000,000	60	360	360
Ground Water:				
	<500	3	3	3
	500–9,999	3	9	9
	10,000–99,999	12	48	48
	100,000–499,999	18	72	72
	≥ 500,000	24	96	96

(ii) *Reporting monitoring results.* You must report the information in this paragraph (a)(1)(ii).

(A) You must report previously collected monitoring results and certify that the reported monitoring results include all compliance and non-compliance results generated during the time period beginning with the first reported result and ending with the most recent subpart L results.

(B) You must certify that the samples were representative of the entire distribution system and that treatment, and distribution system have not changed significantly since the samples were collected.

(C) Your study monitoring plan must include a schematic of your distribution system (including distribution system entry points and their sources, and storage facilities), with notes indicating the locations and dates of all completed or planned system specific study monitoring.

(D) Your system specific study plan must specify the population served and system type (subpart H or ground water).

(E) You must retain a complete copy of your system specific study plan submitted under this paragraph (a)(1), including any State modification of your system specific study plan, for as long as you are required to retain your IDSE report under paragraph (b)(5) of this section.

(F) If you submit previously collected data that fully meet the number of samples required under paragraph (a)(1)(i)(B) of this section and the State rejects some of the data, you must either conduct additional monitoring to replace rejected data on a schedule the State approves or conduct standard monitoring under § 141.601.

(2) *Modeling.* You may comply through analysis of an extended period simulation hydraulic model. The extended period simulation hydraulic model and analysis must meet the criteria in this paragraph (a)(2).

(i) *Minimum requirements.* (A) The model must simulate 24 hour variation in demand and show a consistently repeating 24 hour pattern of residence time.

(B) The model must represent the criteria listed in paragraphs (a)(2)(i)(B)(1) through (9) of this section.

(1) 75% of pipe volume;

(2) 50% of pipe length;

(3) All pressure zones;

(4) All 12-inch diameter and larger pipes;

(5) All 8-inch and larger pipes that connect pressure zones, influence zones from different sources, storage facilities, major demand areas, pumps, and control valves, or are known or expected to be significant conveyors of water;

(6) All 6-inch and larger pipes that connect remote areas of a distribution system to the main portion of the system;

(7) All storage facilities with standard operations represented in the model; and

(8) All active pump stations with controls represented in the model; and

(9) All active control valves.

(C) The model must be calibrated, or have calibration plans, for the current configuration of the distribution system during the period of high TTHM formation potential. All storage facilities must be evaluated as part of the calibration process. All required calibration must be completed no later than 12 months after plan submission.

(ii) *Reporting modeling.* Your system specific study plan must include the information in this paragraph (a)(2)(ii).

(A) Tabular or spreadsheet data demonstrating that the model meets requirements in paragraph (a)(2)(i)(B) of this section.

(B) A description of all calibration activities undertaken, and if calibration is complete, a graph of predicted tank levels versus measured tank levels for the storage facility with the highest residence time in each pressure zone, and a time series graph of the residence time at the longest residence time storage facility in the distribution system showing the predictions for the entire simulation period (*i.e.*, from time zero until the time it takes to for the model to reach a consistently repeating pattern of residence time).

(C) Model output showing preliminary 24 hour average residence time predictions throughout the distribution system.

(D) Timing and number of samples representative of the distribution system planned for at least one monitoring period of TTHM and HAA5 dual sample monitoring at a number of locations no

less than would be required for the system under standard monitoring in § 141.601 during the historical month of high TTHM. These samples must be taken at locations other than existing subpart L compliance monitoring locations.

(E) Description of how all requirements will be completed no later than 12 months after you submit your system specific study plan.

(F) Schematic of your distribution system (including distribution system entry points and their sources, and storage facilities), with notes indicating the locations and dates of all completed system specific study monitoring (if calibration is complete) and all subpart L compliance monitoring.

(G) Population served and system type (subpart H or ground water).

(H) You must retain a complete copy of your system specific study plan submitted under this paragraph (a)(2), including any State modification of your system specific study plan, for as long as you are required to retain your IDSE report under paragraph (b)(7) of this section.

(iii) If you submit a model that does not fully meet the requirements under paragraph (a)(2) of this section, you must correct the deficiencies and respond to State inquiries concerning the model. If you fail to correct deficiencies or respond to inquiries to the State's satisfaction, you must conduct standard monitoring under § 141.601.

(b) *IDSE report.* Your IDSE report must include the elements required in paragraphs (b)(1) through (b)(6) of this section. You must submit your IDSE report according to the schedule in § 141.600(c).

(1) Your IDSE report must include all TTHM and HAA5 analytical results from subpart L compliance monitoring and all system specific study monitoring conducted during the period of the system specific study presented in a tabular or spreadsheet format acceptable to the State. If changed from your system specific study plan submitted under paragraph (a) of this section, your IDSE report must also include a schematic of your distribution system, the population served, and system type (subpart H or ground water).

(2) If you used the modeling provision under paragraph (a)(2) of this section, you must include final information for the elements described in paragraph (a)(2)(ii) of this section, and a 24-hour time series graph of residence time for each subpart V compliance monitoring location selected.

(3) You must recommend and justify subpart V compliance monitoring locations and timing based on the protocol in § 141.605.

(4) Your IDSE report must include an explanation of any deviations from your approved system specific study plan.

(5) Your IDSE report must include the basis (analytical and modeling results) and justification you used to select the recommended subpart V monitoring locations.

(6) You may submit your IDSE report in lieu of your system specific study plan on the schedule identified in § 141.600(c) for submission of the system specific study plan if you believe that you have the necessary information by the time that the system specific study plan is due. If you elect this approach, your IDSE report must also include all information required under paragraph (a) of this section.

(7) You must retain a complete copy of your IDSE report submitted under this section for 10 years after the date that you submitted your IDSE report. If the State modifies the subpart V monitoring requirements that you recommended in your IDSE report or if the State approves alternative monitoring locations, you must keep a copy of the State's notification on file for 10 years after the date of the State's notification. You must make the IDSE report and any State notification available for review by the State or the public.

§ 141.603 40/30 certification.

(a) *Eligibility.* You are eligible for 40/30 certification if you had no TTHM or HAA5 monitoring violations under subpart L of this part and no individual sample exceeded 0.040 mg/L for TTHM or 0.030 mg/L for HAA5 during an eight consecutive calendar quarter period beginning no earlier than the date specified in this paragraph (a).

If your 40/30 certification is due	Then your eligibility for 40/30 certification is based on eight consecutive calendar quarters of subpart L compliance monitoring results beginning no earlier than [1]
(1) October 1, 2006.	January 2004.
(2) April 1, 2007.	January 2004.
(3) October 1, 2007.	January 2005.
(4) April 1, 2008.	January 2005.

[1] Unless you are on reduced monitoring under subpart L of this part and were not required to monitor during the specified period. If you did not monitor during the specified period, you must base your eligibility on compliance samples taken during the 12 months preceding the specified period.

(b) *40/30 certification.* (1) You must certify to your State that every individual compliance sample taken under subpart L of this part during the periods specified in paragraph (a) of this section were ≤0.040 mg/L for TTHM and ≤0.030 mg/L for HAA5, and that you have not had any TTHM or HAA5 monitoring violations during the period specified in paragraph (a) of this section.

(2) The State may require you to submit compliance monitoring results, distribution system schematics, and/or recommended subpart V compliance monitoring locations in addition to your certification. If you fail to submit the requested information, the State may require standard monitoring under § 141.601 or a system specific study under § 141.602.

(3) The State may still require standard monitoring under § 141.601 or a system specific study under § 141.602 even if you meet the criteria in paragraph (a) of this section.

(4) You must retain a complete copy of your certification submitted under this section for 10 years after the date that you submitted your certification. You must make the certification, all data upon which the certification is based, and any State notification available for review by the State or the public.

§ 141.604 Very small system waivers.

(a) If you serve fewer than 500 people and you have taken TTHM and HAA5 samples under subpart L of this part, you are not required to comply with this subpart unless the State notifies you that you must conduct standard monitoring under § 141.601 or a system specific study under § 141.602.

(b) If you have not taken TTHM and HAA5 samples under subpart L of this part or if the State notifies you that you must comply with this subpart, you must conduct standard monitoring under § 141.601 or a system specific study under § 141.602.

§ 141.605 Subpart V compliance monitoring location recommendations.

(a) Your IDSE report must include your recommendations and justification for where and during what month(s) TTHM and HAA5 monitoring for subpart V of this part should be conducted. You must base your recommendations on the criteria in paragraphs (b) through (e) of this section.

(b) You must select the number of monitoring locations specified in the table in this paragraph (b). You will use these recommended locations as subpart V routine compliance monitoring locations, unless State requires different

or additional locations. You should distribute locations throughout the distribution system to the extent possible.

Source water type	Population size category	Monitoring frequency [1]	Distribution system monitoring location			
			Total per monitoring period [2]	Highest TTHM locations	Highest HAA5 locations	Existing subpart L compliance locations
Subpart H:						
	<500	per year	2	1	1	.....
	500–3,300	per quarter	2	1	1	
	3,301–9,999	per quarter	2	1	1	.....
	10,000–49,999	per quarter	4	2	1	1
	50,000–249,999	per quarter	8	3	3	2
	250,000–999,999	per quarter	12	5	4	3
	1,000,000–4,999,999	per quarter	16	6	6	4
	≥5,000,000	per quarter	20	8	7	5
Ground water:						
	<500	per year	2	1	1	
	500–9,999	per year	2	1	1	
	10,000–99,999	per quarter	4	2	1	1
	100,000–499,999	per quarter	6	3	2	1
	≥500,000	per quarter	8	3	3	2

[1] All systems must monitor during month of highest DBP concentrations.
[2] Systems on quarterly monitoring must take dual sample sets every 90 days at each monitoring location, except for subpart H systems serving 500–3,300. Systems on annual monitoring and subpart H systems serving 500–3,300 are required to take individual TTHM and HAA5 samples (instead of a dual sample set) at the locations with the highest TTHM and HAA5 concentrations, respectively. Only one location with a dual sample set per monitoring period is needed if highest TTHM and HAA5 concentrations occur at the same location, and month, if monitored annually).

(c) You must recommend subpart V compliance monitoring locations based on standard monitoring results, system specific study results, and subpart L compliance monitoring results. You must follow the protocol in paragraphs (c)(1) through (c)(8) of this section. If required to monitor at more than eight locations, you must repeat the protocol as necessary. If you do not have existing subpart L compliance monitoring results or if you do not have enough existing subpart L compliance monitoring results, you must repeat the protocol, skipping the provisions of paragraphs (c)(3) and (c)(7) of this section as necessary, until you have identified the required total number of monitoring locations.

(1) Location with the highest TTHM LRAA not previously selected as a subpart V monitoring location.

(2) Location with the highest HAA5 LRAA not previously selected as a subpart V monitoring location.

(3) Existing subpart L average residence time compliance monitoring location (maximum residence time compliance monitoring location for ground water systems) with the highest HAA5 LRAA not previously selected as a subpart V monitoring location.

(4) Location with the highest TTHM LRAA not previously selected as a subpart V monitoring location.

(5) Location with the highest TTHM LRAA not previously selected as a subpart V monitoring location.

(6) Location with the highest HAA5 LRAA not previously selected as a subpart V monitoring location.

(7) Existing subpart L average residence time compliance monitoring location (maximum residence time compliance monitoring location for ground water systems) with the highest TTHM LRAA not previously selected as a subpart V monitoring location.

(8) Location with the highest HAA5 LRAA not previously selected as a subpart V monitoring location.

(d) You may recommend locations other than those specified in paragraph (c) of this section if you include a rationale for selecting other locations. If the State approves the alternate locations, you must monitor at these locations to determine compliance under subpart V of this part.

(e) Your recommended schedule must include subpart V monitoring during the peak historical month for TTHM and HAA5 concentration, unless the State approves another month. Once you have identified the peak historical month, and if you are required to conduct routine monitoring at least quarterly, you must schedule subpart V compliance monitoring at a regular frequency of every 90 days or fewer.

■ 20. Part 141 is amended by adding new subpart V to read as follows:

Subpart V—Stage 2 Disinfection Byproducts Requirements

141.620 General requirements.
141.621 Routine monitoring.
141.622 Subpart V monitoring plan.
141.623 Reduced monitoring.
141.624 Additional requirements for consecutive systems.
141.625 Conditions requiring increased monitoring.
141.626 Operational evaluation levels.
141.627 Requirements for remaining on reduced TTHM and HAA5 monitoring based on subpart L results.
141.628 Requirements for remaining on increased TTHM and HAA5 monitoring based on subpart L results.
141.629 Reporting and recordkeeping requirements.

Subpart V—Stage 2 Disinfection Byproducts Requirements

§ 141.620 General requirements.

(a) *General.* The requirements of subpart V of this part constitute national primary drinking water regulations. The regulations in this subpart establish monitoring and other requirements for

achieving compliance with maximum contaminant levels based on locational running annual averages (LRAA) for total trihalomethanes (TTHM) and haloacetic acids (five)(HAA5), and for achieving compliance with maximum residual disinfectant residuals for chlorine and chloramine for certain consecutive systems.

(b) *Applicability.* You are subject to these requirements if your system is a community water system or a nontransient noncommunity water system that uses a primary or residual disinfectant other than ultraviolet light or delivers water that has been treated with a primary or residual disinfectant other than ultraviolet light.

(c) *Schedule.* You must comply with the requirements in this subpart on the schedule in the following table based on your system type.

If you are this type of system	You must comply with subpart V monitoring by: [1]
Systems that are not part of a combined distribution system and systems that serve the largest population in the combined distribution system	
(1) System serving ≥ 100,000	April 1, 2012.
(2) System serving 50,000–99,999	October 1, 2012.
(3) System serving 10,000–49,999	October 1, 2013.
(4) System serving > 10,000	October 1, 2013 if no Cryptosporidium monitoring is required under § 141.701(a)(4) or October 1, 2014 if Cryptosporidium monitoring is required under § 141.701(a)(4) or (a)(6)
Other systems that are part of a combined distribution system	
(5) Consecutive system or wholesale system	—at the same time as the system with the earliest compliance date in the combined distribution system.

[1] The State may grant up to an additional 24 months for compliance with MCLs and operational evaluaton levels if you require capital improvements to comply with an MCL.

(6) Your monitoring frequency is specified in § 141.621(a)(2).

(i) If you are required to conduct quarterly monitoring, you must begin monitoring in the first full calendar quarter that includes the compliance date in the table in this paragraph (c).

(ii) If you are required to conduct monitoring at a frequency that is less than quarterly, you must begin monitoring in the calendar month recommended in the IDSE report prepared under § 141.601 or § 141.602 or the calendar month identified in the subpart V monitoring plan developed under § 141.622 no later than 12 months after the compliance date in this table.

(7) If you are required to conduct quarterly monitoring, you must make compliance calculations at the end of the fourth calendar quarter that follows the compliance date and at the end of each subsequent quarter (or earlier if the LRAA calculated based on fewer than four quarters of data would cause the MCL to be exceeded regardless of the monitoring results of subsequent quarters). If you are required to conduct monitoring at a frequency that is less than quarterly, you must make compliance calculations beginning with the first compliance sample taken after the compliance date.

(8) For the purpose of the schedule in this paragraph (c), the State may determine that the combined distribution system does not include certain consecutive systems based on factors such as receiving water from a wholesale system only on an emergency basis or receiving only a small percentage and small volume of water from a wholesale system. The State may also determine that the combined distribution system does not include certain wholesale systems based on factors such as delivering water to a consecutive system only on an emergency basis or delivering only a small percentage and small volume of water to a consecutive system.

(d) Monitoring and compliance. (1) Systems required to monitor quarterly. To comply with subpart V MCLs in § 141.64(b)(2), you must calculate LRAAs for TTHM and HAA5 using monitoring results collected under this subpart and determine that each LRAA does not exceed the MCL. If you fail to complete four consecutive quarters of monitoring, you must calculate compliance with the MCL based on the average of the available data from the most recent four quarters. If you take more than one sample per quarter at a monitoring location, you must average all samples taken in the quarter at that location to determine a quarterly average to be used in the LRAA calculation.

(2) Systems required to monitor yearly or less frequently. To determine compliance with subpart V MCLs in § 141.64(b)(2), you must determine that each sample taken is less than the MCL. If any sample exceeds the MCL, you must comply with the requirements of § 141.625. If no sample exceeds the MCL, the sample result for each monitoring location is considered the LRAA for that monitoring location.

(e) *Violation.* You are in violation of the monitoring requirements for each quarter that a monitoring result would be used in calculating an LRAA if you fail to monitor.

§ 141.621 Routine monitoring.

(a) *Monitoring.* (1) If you submitted an IDSE report, you must begin monitoring at the locations and months you have recommended in your IDSE report submitted under § 141.605 following the schedule in § 141.620(c), unless the State requires other locations or additional locations after its review. If you submitted a 40/30 certification under § 141.603 or you qualified for a very small system waiver under § 141.604 or you are a nontransient noncommunity water system serving <10,000, you must monitor at the location(s) and dates identified in your monitoring plan in § 141.132(f), updated as required by § 141.622.

(2) You must monitor at no fewer than the number of locations identified in this paragraph (a)(2).

Source water type	Population size category	Monitoring Frequency [1]	Distribution system monitoring location total per monitoring period [2]
Subpart H:			
	<500	per year	2
	500–3,300	per quarter	2
	3,301–9,999	per quarter	2
	10,000–49,999	per quarter	4
	50,000–249,999	per quarter	8
	250,000–999,999	per quarter	12
	1,000,000–4,999,999	per quarter	16
	≥ 5,000,000	per quarter	20
Ground Water:			
	<500	per year	2
	500–9,999	per year	2
	10,000–99,999	per quarter	4
	100,000–499,999	per quarter	6
	≥ 500,000	per quarter	8

[1] All systems must monitor during month of highest DBP concentrations.
[2] Systems on quarterly monitoring must take dual sample sets every 90 days at each monitoring location, except for subpart H systems serving 500–3,300. Systems on annual monitoring and subpart H systems serving 500–3,300 are required to take individual TTHM and HAA5 samples (instead of a dual sample set) at the locations with the highest TTHM and HAA5 concentrations, respectively. Only one location with a dual sample set per monitoring period is needed if highest TTHM and HAA5 concentrations occur at the same location (and month, if monitored annually).

(3) If you are an undisinfected system that begins using a disinfectant other than UV light after the dates in subpart U of this part for complying with the Initial Distribution System Evaluation requirements, you must consult with the State to identify compliance monitoring locations for this subpart. You must then develop a monitoring plan under § 141.622 that includes those monitoring locations.

(b) Analytical methods. You must use an approved method listed in § 141.131 for TTHM and HAA5 analyses in this subpart. Analyses must be conducted by laboratories that have received certification by EPA or the State as specified in § 141.131.

§ 141.622 Subpart V monitoring plan.

(a)(1) You must develop and implement a monitoring plan to be kept on file for State and public review. The monitoring plan must contain the elements in paragraphs (a)(1)(i) through (a)(1)(iv) of this section and be complete no later than the date you conduct your initial monitoring under this subpart.

(i) Monitoring locations;

(ii) Monitoring dates;

(iii) Compliance calculation procedures; and

(iv) Monitoring plans for any other systems in the combined distribution system if the State has reduced monitoring requirements under the State authority in § 142.16(m).

(2) If you were not required to submit an IDSE report under either § 141.601 or § 141.602, and you do not have sufficient subpart L monitoring locations to identify the required number of subpart V compliance monitoring locations indicated in § 141.605(b), you must identify additional locations by alternating selection of locations representing high TTHM levels and high HAA5 levels until the required number of compliance monitoring locations have been identified. You must also provide the rationale for identifying the locations as having high levels of TTHM or HAA5. If you have more subpart L monitoring locations than required for subpart V compliance monitoring in § 141.605(b), you must identify which locations you will use for subpart V compliance monitoring by alternating selection of locations representing high TTHM levels and high HAA5 levels until the required number of subpart V compliance monitoring locations have been identified.

(b) If you are a subpart H system serving > 3,300 people, you must submit a copy of your monitoring plan to the State prior to the date you conduct your initial monitoring under this subpart, unless your IDSE report submitted under subpart U of this part contains all the information required by this section.

(c) You may revise your monitoring plan to reflect changes in treatment, distribution system operations and layout (including new service areas), or other factors that may affect TTHM or HAA5 formation, or for State-approved reasons, after consultation with the State regarding the need for changes and the appropriateness of changes. If you change monitoring locations, you must replace existing compliance monitoring locations with the lowest LRAA with new locations that reflect the current distribution system locations with expected high TTHM or HAA5 levels. The State may also require modifications in your monitoring plan. If you are a subpart H system serving > 3,300 people, you must submit a copy of your modified monitoring plan to the State prior to the date you are required to comply with the revised monitoring plan.

§ 141.623 Reduced monitoring.

(a) You may reduce monitoring to the level specified in the table in this paragraph (a) any time the LRAA is ≤0.040 mg/L for TTHM and ≤0.030 mg/L for HAA5 at all monitoring locations. You may only use data collected under the provisions of this subpart or subpart L of this part to qualify for reduced monitoring. In addition, the source water annual average TOC level, before any treatment, must be ≤4.0 mg/L at each treatment plant treating surface water or ground water under the direct influence of surface water, based on monitoring conducted under either § 141.132(b)(1)(iii) or § 141.132(d).

Source water type	Population size category	Monitoring frequency [1]	Distribution system monitoring location per monitoring period
Subpart H:			
	<500	.....	monitoring may not be reduced.
	500–3,300	per year	1 TTHM and 1 HAA5 sample: one at the location and during the quarter with the highest TTHM single measurement, one at the location and during the quarter with the highest HAA5 single measurement; 1 dual sample set per year if the highest TTHM and HAA5 measurements occurred at the same location and quarter.
	3,301–9,999	per year	2 dual sample sets: one at the location and during the quarter with the highest TTHM single measurement, one at the location and during the quarter with the highest HAA5 single measurement.
	10,000–49,999	per quarter	2 dual sample sets at the locations with the highest TTHM and highest HAA5 LRAAs.
	50,000–249,999	per quarter	4 dual sample sets—at the locations with the two highest TTHM and two highest HAA5 LRAAs.
	250,000–999,999	per quarter	6 dual sample sets—at the locations with the three highest TTHM and three highest HAA5 LRAAs.
	1,000,000–4,999,999	per quarter	8 dual sample sets—at the locations with the four highest TTHM and four highest HAA5 LRAAs.
	≥ 5,000,000	per quarter	10 dual sample sets—at the locations with the five highest TTHM and five highest HAA5 LRAAs.
Ground Water:			
	<500	every third year	1 TTHM and 1 HAA5 sample: one at the location and during the quarter with the highest TTHM single measurement, one at the location and during the quarter with the highest HAA5 single measurement; 1 dual sample set per year if the highest TTHM and HAA5 measurements occurred at the same location and quarter.
	500–9,999	per year	1 TTHM and 1 HAA5 sample: one at the location and during the quarter with the highest TTHM single measurement, one at the location and during the quarter with the highest HAA5 single measurement; 1 dual sample set per year if the highest TTHM and HAA5 measurements occurred at the same location and quarter.
	10,000–99,999	per year	2 dual sample sets: one at the location and during the quarter with the highest TTHM single measurement, one at the location and during the quarter with the highest HAA5 single measurement.
	100,000–499,999	per quarter	2 dual sample sets; at the locations with the highest TTHM and highest HAA5 LRAAs.
	≥ 500,000	per quarter	4 dual sample sets at the locations with the two highest TTHM and two highest HAA5 LRAAs.

[1] Systems on quarterly monitoring must take dual sample sets every 90 days.

(b) You may remain on reduced monitoring as long as the TTHM LRAA ≤0.040 mg/L and the HAA5 LRAA ≤0.030 mg/L at each monitoring location (for systems with quarterly reduced monitoring) or each TTHM sample ≤0.060 mg/L and each HAA5 sample ≤0.045 mg/L (for systems with annual or less frequent monitoring). In addition, the source water annual average TOC level, before any treatment, must be ≤4.0 mg/L at each treatment plant treating surface water or ground water under the direct influence of surface water, based on monitoring conducted under either § 141.132(b)(1)(iii) or § 141.132(d).

(c) If the LRAA based on quarterly monitoring at any monitoring location exceeds either 0.040 mg/L for TTHM or 0.030 mg/L for HAA5 or if the annual (or less frequent) sample at any location exceeds either 0.060 mg/L for TTHM or 0.045 mg/L for HAA5, or if the source water annual average TOC level, before any treatment, >4.0 mg/L at any treatment plant treating surface water or ground water under the direct influence of surface water, you must resume routine monitoring under § 141.621 or begin increased monitoring if § 141.625 applies.

(d) The State may return your system to routine monitoring at the State's discretion.

§ 141.624 Additional requirements for consecutive systems.

If you are a consecutive system that does not add a disinfectant but delivers water that has been treated with a primary or residual disinfectant other than ultraviolet light, you must comply with analytical and monitoring requirements for chlorine and chloramines in § 141.131 (c) and § 141.132(c)(1) and the compliance requirements in § 141.133(c)(1) beginning April 1, 2009, unless required earlier by the State, and report monitoring results under § 141.134(c).

§ 141.625 Conditions requiring increased monitoring.

(a) If you are required to monitor at a particular location annually or less frequently than annually under § 141.621 or § 141.623, you must increase monitoring to dual sample sets once per quarter (taken every 90 days) at all locations if a TTHM sample is >0.080 mg/L or a HAA5 sample is >0.060 mg/L at any location.

(b) You are in violation of the MCL when the LRAA exceeds the subpart V MCLs in § 141.64(b)(2), calculated based on four consecutive quarters of monitoring (or the LRAA calculated based on fewer than four quarters of data if the MCL would be exceeded regardless of the monitoring results of subsequent quarters). You are in violation of the monitoring requirements for each quarter that a monitoring result would be used in calculating an LRAA if you fail to monitor.

(c) You may return to routine monitoring once you have conducted increased monitoring for at least four consecutive quarters and the LRAA for every monitoring location is ≤0.060 mg/L for TTHM and ≤0.045 mg/L for HAA5.

§ 141.626 Operational evaluation levels.

(a) You have exceeded the operational evaluation level at any monitoring location where the sum of the two previous quarters' TTHM results plus twice the current quarter's TTHM result, divided by 4 to determine an average, exceeds 0.080 mg/L, or where the sum of the two previous quarters' HAA5 results plus twice the current quarter's HAA5 result, divided by 4 to determine an average, exceeds 0.060 mg/L.

(b)(1) If you exceed the operational evaluation level, you must conduct an operational evaluation and submit a written report of the evaluation to the State no later than 90 days after being notified of the analytical result that causes you to exceed the operational evaluation level. The written report must be made available to the public upon request.

(2) Your operational evaluation must include an examination of system treatment and distribution operational practices, including storage tank operations, excess storage capacity, distribution system flushing, changes in sources or source water quality, and treatment changes or problems that may contribute to TTHM and HAA5 formation and what steps could be considered to minimize future exceedences.

(i) You may request and the State may allow you to limit the scope of your evaluation if you are able to identify the cause of the operational evaluation level exceedance.

(ii) Your request to limit the scope of the evaluation does not extend the schedule in paragraph (b)(1) of this section for submitting the written report. The State must approve this limited scope of evaluation in writing and you must keep that approval with the completed report.

§ 141.627 Requirements for remaining on reduced TTHM and HAA5 monitoring based on subpart L results.

You may remain on reduced monitoring after the dates identified in § 141.620(c) for compliance with this subpart only if you qualify for a 40/30 certification under § 141.603 or have received a very small system waiver under § 141.604, plus you meet the reduced monitoring criteria in § 141.623(a), and you do not change or add monitoring locations from those used for compliance monitoring under subpart L of this part. If your monitoring locations under this subpart differ from your monitoring locations under subpart L of this part, you may not remain on reduced monitoring after the dates identified in § 141.620(c) for compliance with this subpart.

§ 141.628 Requirements for remaining on increased TTHM and HAA5 monitoring based on subpart L results.

If you were on increased monitoring under § 141.132(b)(1), you must remain on increased monitoring until you qualify for a return to routine monitoring under § 141.625(c). You must conduct increased monitoring under § 141.625 at the monitoring locations in the monitoring plan developed under § 141.622 beginning at the date identified in § 141.620(c) for compliance with this subpart and remain on increased monitoring until you qualify for a return to routine monitoring under § 141.625(c).

§ 141.629 Reporting and recordkeeping requirements.

(a) *Reporting.* (1) You must report the following information for each monitoring location to the State within 10 days of the end of any quarter in which monitoring is required:

(i) Number of samples taken during the last quarter.

(ii) Date and results of each sample taken during the last quarter.

(iii) Arithmetic average of quarterly results for the last four quarters for each monitoring location (LRAA), beginning at the end of the fourth calendar quarter that follows the compliance date and at the end of each subsequent quarter. If the LRAA calculated based on fewer than four quarters of data would cause the MCL to be exceeded regardless of the monitoring results of subsequent quarters, you must report this information to the State as part of the first report due following the compliance date or anytime thereafter that this determination is made. If you are required to conduct monitoring at a frequency that is less than quarterly, you must make compliance calculations beginning with the first compliance sample taken after the compliance date, unless you are required to conduct increased monitoring under § 141.625.

(iv) Whether, based on § 141.64(b)(2) and this subpart, the MCL was violated at any monitoring location.

(v) Any operational evaluation levels that were exceeded during the quarter and, if so, the location and date, and the calculated TTHM and HAA5 levels.

(2) If you are a subpart H system seeking to qualify for or remain on reduced TTHM/HAA5 monitoring, you must report the following source water TOC information for each treatment plant that treats surface water or ground water under the direct influence of surface water to the State within 10 days of the end of any quarter in which monitoring is required:

(i) The number of source water TOC samples taken each month during last quarter.

(ii) The date and result of each sample taken during last quarter.

(iii) The quarterly average of monthly samples taken during last quarter or the result of the quarterly sample.

(iv) The running annual average (RAA) of quarterly averages from the past four quarters.

(v) Whether the RAA exceeded 4.0 mg/L.

(3) The State may choose to perform calculations and determine whether the MCL was exceeded or the system is eligible for reduced monitoring in lieu of having the system report that information

(b) *Recordkeeping.* You must retain any subpart V monitoring plans and your subpart V monitoring results as required by § 141.33.

PART 142—NATIONAL PRIMARY DRINKING WATER REGULATIONS IMPLEMENTATION

■ 21. The authority citation for part 142 continues to read as follows:

Authority: 42 U.S.C. 300f, 300g–1, 300g–2, 300g–3, 300g–4, 300g–5, 300g–6, 300j–4, 300j–9, and 300j–11.

■ 22. Section 142.14 is amended by adding paragraph (a)(8) to read as follows:

§ 142.14 Records kept by States.

(a) * * *

(8) Any decisions made pursuant to the provisions of 40 CFR part 141, subparts U and V of this part.

(i) IDSE monitoring plans, plus any modifications required by the State, must be kept until replaced by approved IDSE reports.

(ii) IDSE reports and 40/30 certifications, plus any modifications

required by the State, must be kept until replaced or revised in their entirety.

(iii) Operational evaluations submitted by a system must be kept for 10 years following submission.

* * * * *

■ 23. Section 142.16 is amended by adding paragraph (m) to read as follows:

§ 142.16 Special primacy requirements.

* * * * *

(m) *Requirements for States to adopt 40 CFR part 141, subparts U and V.* In addition to the general primacy requirements elsewhere in this part, including the requirements that State regulations be at least as stringent as federal requirements, an application for approval of a State program revision that adopts 40 CFR part 141, subparts U and V, must contain a description of how the State will implement a procedure for addressing modification of wholesale system and consecutive system monitoring on a case-by-case basis for part 141 subpart V outside the provisions of § 141.29 of this chapter, if the State elects to use such an authority. The procedure must ensure that all systems have at least one compliance monitoring location.

* * * * *

[FR Doc. 06–3 Filed 1–3–06; 8:45 am]

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Appendix C
Rule Fact Sheets/Quick Reference Guides

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Stage 2 DBPR
IDSE 40/30 Certification and Very Small System Waiver Factsheet

What Is The Stage 2 DBPR?

The U.S. Environmental Protection Agency (EPA) published the Stage 2 Disinfectants and Disinfection Byproducts Rule (Stage 2 DBPR) on January 4, 2006. The Stage 2 DBPR builds on existing regulations by requiring water systems to meet disinfection byproduct (DBP) maximum contaminant levels (MCLs) at each monitoring site in the distribution system to better protect public health.

What Is The IDSE Provision Of The Stage 2 DBPR?

The Stage 2 DBPR includes a provision requiring all community water systems (CWS) and only nontransient noncommunity water systems (NTNCWS) serving more than 10,000 people to conduct an initial distribution system evaluation (IDSE). NTNCWS serving less than 10,000 are exempted from IDSE requirements, but will need to comply with the Stage 2 DBPR compliance monitoring requirements. The goal of the IDSE is to characterize the distribution system and identify monitoring sites where customers may be exposed to high levels of total trihalomethanes (TTHM) and haloacetic acids (HAA5). There are four ways to comply with the IDSE requirements: Standard Monitoring, System Specific Study, 40/30 Certification (40/30), and Very Small System (VSS) Waiver. The 40/30 and the VSS Waiver allows a system to comply with the IDSE requirement without having to conduct additional distribution system monitoring. This factsheet provides information regarding 40/30 and VSS Waiver eligibility criteria and requirements.

Eligibility Criteria for 40/30 Certification & Very Small System Waiver

40/30 Certification

To be eligible for a 40/30, the system must meet all of the following requirements for eight consecutive quarters, as dictated by its Schedule*:

- Collected all required Stage 1 DBPR samples.
- No individual TTHM samples exceeded 0.040 mg/L and no individual HAA5 samples exceeded 0.030 mg/L.
- The system has not had any TTHM or HAA5 monitoring violations.

Very Small System Waiver

To be eligible for a VSS Waiver, the system must meet all of the following requirements:

- System serves less than 500 people.
- System has collected eligible TTHM & HAA5 data.

VSS eligibility does not depend on TTHM and HAA5 sample results. Samples do not need to be below any particular level for the system to receive the VSS Waiver.

* Eligibility & Compliance Dates for 40/30 are found in Table 1.

IF I MEET THE ELIGIBILITY CRITERIA, HOW DO I APPLY FOR A 40/30?

Submit Electronically:

- Go To: www.epa.gov/safewater/disinfection/tools and access the IDSE Tool, Plan/Report Entry.
- Create a custom 40/30 Certification Letter.
- Attach additional information if required.*
- Submit by the Due Date presented in Table 1 (below).
- Keep the confirmation number and a copy of your 40/30 Certification Letter for your files.

Submit By Mail:

- Create a 40/30 Certification Letter. A 40/30 Certification template can be found in the IDSE Guidance Manual.
- Attach additional information, if required.*
- Mail submission to the IPMC:

  US EPA-IPMC
  PO Box 98
  Dayton, OH 45401-0098

*EPA or the state may require a system to submit the following additional information with the 40/30 submission:

- Stage 1 DBPR Compliance Monitoring Data
- Distribution System Schematic
- Proposed Stage 2 DBPR Compliance Monitoring locations

Systems are encouraged to check with EPA or the state to determine if they need to submit any additional information.

Table 1: 40/30 Criteria Compliance Dates

If you are a system serving:	Schedule:[1]	Date Eligibility:	40/30 Due Date:
At least 100,000 people or part of a combined distribution system serving at least 100,000 people	Schedule 1	Eight Consecutive Quarters Starting No Earlier than January 2004	October 1, 2006
50,000 to 99,999 people or part of a combined distribution system serving 50,000 to 99,999 people	Schedule 2	Eight Consecutive Quarters Starting No Earlier than January 2004	April 1, 2007
10,000 to 49,999 people or part of a combined distribution system serving 10,000 to 49,999 people	Schedule 3	Eight Consecutive Quarters Starting No Earlier than January 2005	October 1, 2007
Less than 10,000 or part of a combined distribution system serving less than 10,000	Schedule 4	Eight Consecutive Quarters Starting No Earlier than January 2005	April 1, 2008

[1] Your schedule is defined by the largest system in your combined distribution system.

WHAT IF I HAVE OPERATIONAL DATA BUT NO STAGE 1 DBPR COMPLIANCE DATA?

Systems that have not conducted compliance monitoring under the Stage 1 DBPR but have TTHM and HAA5 operational data should contact EPA or the state to determine if the data is sufficient to qualify for the 40/30 or VSS Waiver. The operational data must have been:

- Analyzed by an EPA-approved method
- Analyzed by a certified laboratory
- Collected in areas representative of the Maximum Residence Time
- Collected during the month of warmest water temperature

WHAT DOES IT MEAN TO RECEIVE AN APPROVED 40/30 OR VSS WAIVER?

An approved 40/30 or VSS Waiver satisfies the IDSE requirement of the Stage 2 DBPR without requiring additional monitoring. However, a system with an approved 40/30 or VSS Waiver will need to submit a Stage 2 DBPR compliance monitoring plan and will need to start Stage 2 DBPR compliance monitoring, as indicated by the rule, based on its Schedule.

IF I MEET THE ELIGIBILITY CRITERIA, HOW DO I APPLY FOR A VSS WAIVER?

Systems that meet the VSS Waiver eligibility criteria automatically qualify for the VSS Waiver, unless they are contacted by EPA or the state and informed that they must complete Standard Monitoring or System Specific Study.

WHEN WILL I KNOW IF MY 40/30 OR VSS WAIVER HAS BEEN APPROVED?

40/30 Approval:

EPA and the state are not required to send a confirmation that a 40/30 certification has been accepted. If EPA or the state does not contact you within a year after the 40/30 submission deadline (see Table 1), you may assume the 40/30 certification has been accepted. Otherwise, EPA or the state will inform you that you must conduct Standard Monitoring or System Specific Study.

VSS Waiver Approval:

EPA and the state are not required to send a confirmation that a VSS Waiver has been approved. EPA or the state will contact those systems required to conduct Standard Monitoring or System Specific Study. For systems serving less than 500 people, standard monitoring consists of preparing a monitoring plan, collecting TTHM/HAA5 samples at two locations in the distribution system and completing an IDSE Report (see the IDSE Guidance Manual for more information at www.epa.gov/safewater/disinfection/stage2).

NEXT STEPS

If your system meets the 40/30 or VSS WAIVER criteria and EPA or the state does not notify you that you need to conduct Standard Monitoring or System Specific Study, your system has satisfied the IDSE requirements. However, your system will still need to prepare a compliance monitoring plan for Stage 2 DBPR. This plan must be completed before your system is required to begin Stage 2 DBPR compliance monitoring. Your system will need to continue monitoring under Stage 1 DBPR until Stage 2 DBPR compliance monitoring begins (see Table 2).

Table 2: Stage 2 DBPR Compliance Monitoring

If you are on IDSE Schedule:[1]	You must begin Stage 2 DBPR monitoring:
Schedule 1	April 1, 2012
Schedule 2	October 1, 2012
Schedule 3	October 1, 2013
Schedule 4	October 1, 2013 if no Cryptosporidium monitoring required under LT2ESWTR. **OR** October 1, 2014 if Cryptosporidium monitoring is required under LT2ESWTR.

[1] Schedule for systems in a combined distribution system is based on that of the largest system in the combined distribution system.

ADDITIONAL GUIDANCE MATERIALS

The following guidance materials address the IDSE requirements for the Stage 2 DBPR:

- *Initial Distribution System Evaluation Guidance Manual for the Final Stage 2 Disinfectants and Disinfection Byproducts Rule* (EPA 815-B-06-002) - This manual is a comprehensive technical guidance document about all IDSE options, for all system sizes and types.

- *Initial Distribution System Evaluation Guide for Systems Serving < 10,000 People For the Final Stage 2 Disinfectants and Disinfection Byproducts Rule* (EPA 815-B-06-001) - This manual focuses on information that systems serving less than 10,000 are most likely to use. It does not discuss the IDSE system specific study option.

- *IDSE Tool* – Is a web-based tool that walks the user through the IDSE process. A Wizard determines IDSE requirements and selects the best IDSE option for your system. The tool creates Custom Forms your system (based on population served and system type) can submit electronically to EPA's Information Processing and Management Center for EPA/state review. (Available on-line at www.epa.gov/safewater/disinfection/tools.)

For additional guidance on the Stage 2 DBPR, you may refer to the following existing and future EPA materials:

- Stage 2 DBPR Quick Reference Guides (Schedules 1 – 4).

- Simultaneous Compliance Guidance Manuals for the Stage 2 Rules (draft version anticipated mid-2006).

- Stage 2 Disinfectant and Disinfection Byproducts Rule: Small Entity Compliance Guide – One of the Simple Tools for Effective Performance (STEP) Guide Series (draft version anticipated late 2006).

- Consecutive System Guidance Manual for the Final Stage 2 Disinfectants and Disinfection Byproducts Rule (draft version anticipated late 2006).

- Operational Evaluation Guidance Manual for the Final Stage 2 Disinfectants and Disinfection Byproducts Rule (draft version anticipated late 2006).

Materials can be downloaded from www.epa.gov/safewater/disinfection/stage2, as they become available.

For additional information, please contact the Safe Drinking Water Hotline at 1-800-426-4791, send an email to stage2mdbp@epa.gov, or visit www.epa.gov/safewater/disinfection/stage2.

Stage 2 DBPR
IDSE Standard Monitoring Factsheet

What Is The Stage 2 DBPR?

The U.S. Environmental Protection Agency (EPA) published the Stage 2 Disinfectants and Disinfection Byproducts Rule (Stage 2 DBPR) on January 4, 2006. The Stage 2 DBPR builds on existing regulations by requiring water systems to meet disinfection byproduct (DBP) maximum contaminant levels (MCLs) at each monitoring site in the distribution system to better protect public health.

What Is The IDSE Provision Of The Stage 2 DBPR?

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Standard Monitoring Requirements

Systems opting to conduct Standard Monitoring will need to:

- Step 1: Prepare and submit a Standard Monitoring Plan by the date specified in Table 1 (below).
- Step 2: Conduct one year of Standard Monitoring in the distribution system.
- Step 3: Prepare and submit the IDSE Report.
- Step 4: Prepare a Stage 2 DBPR compliance monitoring plan.

Table 1: Standard Monitoring Compliance Dates

If you are a system serving:	Schedule:[1]	Standard Monitoring Plan Due Date:	Complete Standard Monitoring by:	Submit IDSE Report By:	Begin Compliance Monitoring by:
At least 100,000 people or part of a combined distribution system serving at least 100,000 people	Schedule 1	October 1, 2006	September 30, 2008	January 1, 2009	April 1, 2012
50,000 to 99,999 people or part of a combined distribution system serving 50,000 to 99,999 people	Schedule 2	April 1, 2007	March 31, 2009	July 1, 2009	October 1, 2012
10,000 to 49,999 people or part of a combined distribution system serving 10,000 to 49,999 people	Schedule 3	October 1, 2007	September 30, 2009	January 1, 2010	October 1, 2013
Less than 10,000 or part of a combined distribution system serving less than 10,000	Schedule 4	April 1, 2008	March 31, 2010	July 1, 2010	October 1, 2013 [2]

[1] Your schedule is defined by the largest system in your combined distribution system.
[2] Systems not conducting *Cryptosporidium* monitoring under 40 CFR 141.701(a)(4) must begin Stage 2 DBPR compliance monitoring by this date. Systems conducting *Cryptosporidium* monitoring under 40 CFR 141.701(a)(4) or 141.701(a)(6) must begin Stage 2 DBPR compliance monitoring by October 1, 2014.

STEP 1: PREPARE & SUBMIT STANDARD MONITORING PLAN

THE REQUIRED ELEMENTS OF A STANDARD MONITORING PLAN ARE:

- Population served by your system.
- System Type: Subpart H (surface water or ground water under the direct influence of surface water) or Ground Water.
- Distribution System Schematic showing:
  - Entry points.
  - Sources.
  - Locations and dates of all projected standard monitoring and Stage 1 DBPR compliance samples.
  - Locations of tanks, booster chlorination and water mains.
  - Justification of Standard Monitoring site selection and a summary of additional data used to support standard monitoring site selection.

HOW TO SELECT STANDARD MONITORING SITES – Your standard monitoring plan must include the locations and dates for one year of monitoring. The monitoring frequency and number of sites required is based on your system's source water and population as shown in Tables 2. These sites are in addition to your Stage 1 DBPR compliance monitoring sites; therefore, you may not use Stage 1 DBPR monitoring locations as standard monitoring sites. In addition, the system will need to determine and monitor during the peak historical month.

Peak Historical Month:
Is the month with the highest TTHM or the highest HAA5 levels or the warmest water temperature. It is meant to represent the "worst case" scenario for DBP formation.

Table 2: Standard Monitoring Requirements for Subpart H Systems

Source Type	Population Size Category	Monitoring Periods and Frequency of Sampling	Distribution System Monitoring Locations [1]				
			Total per monitoring period	Near Entry Points[2]	Average Residence Time	High TTHM Locations	High HAA5 Locations
Subpart H	<500 consecutive	one (during peak historical month)	2	1	-	1	-
	<500 non-consecutive		2		-	1	1
	500-3,300 consecutive	four (every 90 days)	2	1	-	1	-
	500-3,300 non-consecutive		2	-	-	1	1
	3,301-9,999		4	-	1	2	1
	10,000-49,999	six (every 60 days)	8	1	2	3	2
	50,000-249,999		16	3	4	5	4
	250,000-999,999		24	4	6	8	6
	1,000,000-4,999,999		32	6	8	10	8
	$5,000,000		40	8	10	12	10
Ground	<500 consecutive	one (during peak historical month)	2	1	-	1	-
	<500 non-consecutive		2	-	-	1	1
	500-9,999	Four (every 90 days)	2	-	-	1	1
	10,000-99,999		6	1	1	2	2
	100,000-499,999		8	1	1	3	3
	$500,000		12	2	2	4	4

[1] When choosing sites consider TTHM and HAA5 Levels, Residence Time, Water Age, Disinfectant Residual, Geographic Coverage of Distribution System, and Hydraulic Representation.

[2] Near Entry Points: If you have more sites than required: choose entry points with the highest flows. If you have fewer sites than required: replace additional sites with TTHM and HAA5 sites.

HOW TO SUBMIT A STANDARD MONITORING PLAN:

Submit Electronically:

- Go To: www.epa.gov/safewater/disinfection/tools and access the IDSE Tool, Plan/Report Entry.
- Create an electronic Standard Monitoring Plan using the template provided in the IDSE Tool.
- Attach schematic and additional information.
- Submit by the Due Date presented in Table 1 (above).
- Keep the confirmation number and copy of your plan for your files.

Submit By Mail:

- Create a Standard Monitoring Plan. A template can be found in the IDSE Guidance Manual.
- Attach schematic and additional information.
- Mail submission to the IPMC:
  US EPA-IPMC
  PO Box 98
  Dayton, OH 45401-0098

STEP 2: CONDUCT STANDARD MONITORING

Once EPA or the state approves your plan, you must conduct standard monitoring at each of the monitoring locations and dates listed in your standard monitoring plan. If you deviate from the approved plan for any reason, you must include an explanation for the deviation in your IDSE Report. During each sample event, you must collect a dual sample set at each location. A dual sample set consists of analyzing one sample for TTHM and another one for HAA5. You must use a certified laboratory and EPA-approved methods for analysis of your TTHM and HAA5 samples.

STEP 3: PREPARE AND SUBMIT IDSE REPORT

The required elements of the IDSE Report are:

- TTHM and HAA5 analytical results from all Stage 1 DBPR and Standard Monitoring conducted during the period of standard monitoring, provided in a tabular or spreadsheet format.
- Explanation of any deviations from the approved standard monitoring plan.
- Recommendations and justification for Stage 2 DBPR compliance monitoring sites and dates.
- If the following information changed from the approved standard monitoring plan, also include:
  - Distribution system schematic.
  - Population served by the system.
  - System type (subpart H or ground water).

HOW TO SELECT STAGE 2 DBPR COMPLIANCE MONITORING SITES AND DATES – You will use results from standard monitoring and Stage 1 DBPR compliance monitoring to select Stage 2 DBPR compliance monitoring sites. The Stage 2 DBPR provides a specific protocol for selecting these sites based on ranking the TTHM and HAA5 locational running annual average (LRAA) for each standard monitoring and Stage 1 DBPR compliance monitoring site. This protocol is summarized in Table 3. If the system decides to recommend an alternative Stage 2 DBPR compliance monitoring site, a justification must be included in the report.

Table 3: Protocol to Select Stage 2 DBPR Compliance Monitoring Locations

Select the location with:	
1 Highest TTHM LRAA	5 Next highest TTHM LRAA
2 Highest HAA5 LRAA	6 Next highest HAA5 LRAA
3* Highest HAA5 LRAA from Stage 1 DBPR sites (Average residence time if surface water, maximum residence time if ground water system)	7* Highest TTHM LRAA from Stage 1 DBPR sites (Average residence time if surface water, maximum residence time if ground water system)
4 Next highest TTHM LRAA.	8 Next highest HAA5 LRAA
*skip this step if you have no more Stage 1 DBPR sites	

As with standard monitoring, you will select your peak historical month and sampling frequency. You should use the peak historical month selected in your standard monitoring plan unless new data suggest another month. The number of sites you select as well as the monitoring frequency is based on your source water type and population, as listed in Table 4. If you sample more than annually, you will conduct Stage 2 DBPR compliance sampling at equal intervals around the peak historical month, based on your required sampling frequency.

Table 4: Stage 2 DBPR Compliance Monitoring Requirements

Source Water Type	Population Size Category	Monitoring Frequency[1]	Distribution System Monitoring Location			
			Total per monitoring period	**Highest TTHM Locations**	**Highest HAA5 Locations**	**Existing Stage 1 DBPR Compliance Locations**
Subpart H	<500	per year	2	1	1	-
	500-3,300	per quarter	2	1	1	-
	3,301-9,999	per quarter	2	1	1	-
	10,000-49,999	per quarter	4	2	1	1
	50,000-249,999	per quarter	8	3	3	2
	250,000-999,999	per quarter	12	5	4	3
	1,000,000-4,999,999	per quarter	16	6	6	4
	$5,000,000	per quarter	20	8	7	5
Ground	<500	per year	2	1	1	-
	500-9,999	per year	2	1	1	-
	10,000-99,999	per quarter	4	2	1	1
	100,000-499,999	per quarter	6	3	2	1
	$500,000	per quarter	8	3	3	2

[1] All systems must monitor during the month of highest DBP concentrations.

[2] Systems on quarterly monitoring must take dual sample sets every 90 days at each monitoring location, except for Subpart H systems serving 500-3,300. Systems on annual monitoring and Subpart H systems serving 500-3,300 are required to take individual TTHM and HAA5 samples (instead of a dual sample set) at the locations with the highest TTHM and HAA5 concentrations, respectively. Only one location with a dual sample set per monitoring period in deeded if highest TTHM and HAA5 concentrations occur at the same location, and month, in monitored annually.

STEP 4: PREPARE STAGE 2 DBPR COMPLIANCE MONITORING PLAN

The required elements of the Stage 2 DBPR compliance monitoring plan are the compliance monitoring locations, dates, and compliance calculation procedures. If you decide to include the compliance calculation procedures in your IDSE Report, you will not have to prepare a separate Stage 2 DBPR compliance monitoring plan. However, if you did not include the information required for the Stage 2 DBPR compliance monitoring plan as part of your IDSE Report, your next step will be to prepare this plan before beginning Stage 2 DBPR compliance monitoring. If you are a Subpart H system serving more than 3,300 people, you must submit a copy of the monitoring plan to your state before Stage 2 DBPR compliance monitoring begins. Also, systems should check with their states in case there are state requirements, in addition to the Federal requirements, that need to be included in the IDSE Report.

ADDITIONAL GUIDANCE MATERIALS

The following guidance materials address the IDSE requirements for the Stage 2 DBPR:

- *Initial Distribution System Evaluation Guidance Manual for the Final Stage 2 Disinfectants and Disinfection Byproducts Rule* (EPA 815-B-06-002) - This manual is a comprehensive technical guidance document for all system sizes and types and all IDSE options.

- *Initial Distribution System Evaluation Guide for Systems Serving < 10,000 People For the Final Stage 2 Disinfectants and Disinfection Byproducts Rule* (EPA 815-B-06-001) - This manual focuses on information that systems serving less than 10,000 are most likely to use. It does not discuss the IDSE system specific study option.

- *IDSE Tool* – Is a web-based tool that walks the user through the IDSE process. A Wizard determines IDSE requirements and selects the best IDSE option for your system. The tool creates Custom Forms your system (based on population served and system type) can submit electronically to EPA's Information Processing and Management Center for EPA/state review. (Available on-line at www.epa.gov/safewater/disinfection/tools.)

For additional guidance on the Stage 2 DBPR, you may refer to the following existing and future EPA materials:

- Stage 2 DBPR Quick Reference Guides (Schedules 1 – 4).

- Simultaneous Compliance Guidance Manuals for the Stage 2 Rules (draft version anticipated mid-2006).

- Stage 2 Disinfectant and Disinfection Byproducts Rule: Small Entity Compliance Guide – One of the Simple Tools for Effective Performance (STEP) Guide Series (draft version anticipated late 2006).

- Consecutive System Guidance Manual for the Final Stage 2 Disinfectants and Disinfection Byproducts Rule (draft version anticipated late 2006).

- Operational Evaluation Guidance Manual for the Final Stage 2 Disinfectants and Disinfection Byproducts Rule (draft version anticipated late 2006).

Materials can be downloaded from www.epa.gov/safewater/disinfection/stage2, as they become available.

For additional information, please contact the Safe Drinking Water Hotline at 1-800-426-4791, send an email to stage2mdbp@epa.gov, or visit www.epa.gov/safewater/disinfection/stage2.

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Stage 2 DBPR
IDSE System Specific Study Factsheet

What Is The Stage 2 DBPR?

The U.S. Environmental Protection Agency (EPA) published the Stage 2 Disinfectants and Disinfection Byproducts Rule (Stage 2 DBPR) on January 4, 2006. The Stage 2 DBPR builds on existing regulations by requiring water systems to meet disinfection byproduct (DBP) maximum contaminant levels (MCLs) at each monitoring site in the distribution system to better protect public health.

What Is The IDSE Provision Of The Stage 2 DBPR?

The Stage 2 DBPR includes a provision requiring all community water systems (CWS) and only nontransient noncommunity water systems (NTNCWS) serving more than 10,000 people to conduct an initial distribution system evaluation (IDSE). NTNCWS serving less than 10,000 are exempted from IDSE requirements, but will need to comply with the Stage 2 DBPR compliance monitoring requirements. The goal of the IDSE is to characterize the distribution system and identify monitoring sites where customers may be exposed to high levels of total trihalomethanes (TTHM) and haloacetic acids (HAA5). There are four ways to comply with the IDSE requirements: Standard Monitoring, System Specific Study (SSS), 40/30 Certification (40/30), and Very Small System (VSS) Waiver. SSS is an option for systems that have extensive existing DBP data or have prepared a hydraulic model that can be used to determine locations of high DBP levels in their distribution system. Systems will have to meet minimum requirements to perform either option. This factsheet provides information regarding the SSS option for both Existing Monitoring and for Hydraulic Modeling.

What is a System Specific Study (SSS)?

SSS – Existing Monitoring

An evaluation of a system's DBP levels based on existing monitoring data collected throughout the distribution system and during the peak historical month. The rule requires a minimum number of samples and specific locations in the distribution system. This IDSE option is most likely to be used by systems that have extensive operational DBP data in addition to Stage 1 DBPR compliance monitoring data. Systems may use a combination of all qualifying data (i.e., existing operational and compliance data) to determine the best locations for Stage 2 DBPR compliance monitoring.

SSS – Hydraulic Modeling

An evaluation of a system's DBP levels based on results of an Extended Period Simulation (EPS) hydraulic model using water age as a surrogate for DBP formation. This IDSE option is most likely to be used by systems that have a high level of technical expertise and already utilize modeling technologies outside of the IDSE process. The model must meet the minimum requirements presented in the rule, such as percentage of distribution system represented by the model and calibration. The model results are used in conjunction with Stage 1 DBPR compliance data and one round of monitoring during the IDSE to select the best locations for Stage 2 DBPR compliance monitoring.

SYSTEM SPECIFIC STUDY REQUIREMENTS

Systems opting to conduct an SSS will need to:

- Step 1: Prepare and submit an SSS Plan by the date specified in Table 1 (below).
- Step 2: Address additional SSS requirements.
- Step 3: Prepare and submit the IDSE Report.
- Step 4: Prepare a Stage 2 DBPR compliance monitoring plan.

If you are conducting an SSS for IDSE compliance, you will be required to prepare a study plan, possibly conduct some additional monitoring, develop an IDSE Report, and prepare a Stage 2 DBPR compliance monitoring plan. These documents must be submitted by the deadlines listed in Table 1; however, you can submit two or all three of the documents as one submission as long as the required elements of each document are included and the deadline for the earliest document is met.

Table 1: SSS Compliance Dates

If you are a system serving:	Schedule:[1]	SSS Plan Due Date:	Submit IDSE Report By:	Begin Compliance Monitoring by:
At least 100,000 people or part of a combined distribution system serving at least 100,000 people	Schedule 1	October 1, 2006	January 1, 2009	April 1, 2012
50,000 to 99,999 people or part of a combined distribution system serving 50,000 to 99,999 people	Schedule 2	April 1, 2007	July 1, 2009	October 1, 2012
10,000 to 49,999 people or part of a combined distribution system serving 10,000 to 49,999 people	Schedule 3	October 1, 2007	January 1, 2010	October 1, 2013
Less than 10,000 or part of a combined distribution system serving less than 10,000	Schedule 4	April 1, 2008	July 1, 2010	October 1, 2013 [2]

[1] Your schedule is defined by the largest system in your combined distribution system.

[2] Systems not conducting *Cryptosporidium* monitoring under 40 CFR 141.701(a)(4) must begin Stage 2 DBPR compliance monitoring by this date. Systems conducting *Cryptosporidium* monitoring under 40 CFR 141.701(a)(4) or 141.701(a)(6) must begin Stage 2 DBPR compliance monitoring by October 1, 2014.

STEP 1: PREPARE & SUBMIT SYSTEM SPECIFIC STUDY PLAN

THE REQUIRED ELEMENTS OF AN SSS PLAN INCLUDE:

- Population served by your system.
- System Type: Subpart H (surface water or ground water under the direct influence of surface water) or Ground Water.
- Distribution System Schematic showing:
  - Entry Points
  - Sources
  - Locations and dates of all planned or completed SSS monitoring
  - Locations and dates of planned Stage 1 DBPR compliance samples

Specific requirements for each type of SSS are listed on the next page. If you meet the requirements for the IDSE Report, you may submit the SSS Plan and IDSE Report together.

HOW TO SUBMIT AN SSS PLAN:

Submit Electronically:

- Go To: www.epa.gov/safewater/disinfection/tools and access the IDSE Tool, Plan/Report Entry.
- Create an electronic SSS Plan using the template provided in the IDSE Tool.
- Attach schematic and additional information.
- Submit by the Due Date presented in Table 1 (above).
- Keep the confirmation number and copy of your plan for your files.

Submit By Mail:

- Create an SSS Plan. A template can be found in the IDSE Guidance Manual.
- Attach schematic and additional information.
- Mail submission to the IPMC:
  US EPA-IPMC
  PO Box 98
  Dayton, OH 45401-0098

STEP 2: ADDRESS ADDITIONAL SYSTEM SPECIFIC STUDY REQUIREMENTS

THE SPECIFIC ELEMENTS REQUIRED FOR AN EXISTING MONITORING SYSTEM SPECIFIC STUDY PLAN:

- Previously collected monitoring results: Data must be no more than 5 years old as of the due date of submission and must have been analyzed by approved methods.
- Certification that:
  - All compliance and operational data taken during the SSS period are included.
  - Distribution system and treatment have not significantly changed since the period of SSS data.
  - Samples are representative of the entire distribution system.
- Locations and frequency of sampling must meet the requirements of Table 2 and each site must be sampled at least once during peak historical month (i.e., high TTHM, high HAA5, or high water temperature) for each 12 months of qualifying data. If additional data is needed to meet minimum requirements, the SSS monitoring plan must include the locations and dates for proposed SSS monitoring.

Table 2: Monitoring Requirements for Existing Monitoring SSS

Source Water Type	Population Size Category	Total per monitoring period	Minimum Number of Samples	
			TTHM	HAA5
Subpart H	<500	3	3	3
	500-3,300	3	9	9
	3,301-9,999	6	36	36
	10,000-49,999	12	72	72
	50,000-249,999	24	144	144
	250,000-999,999	36	216	216
	1,000,000-4,999,999	48	288	288
	$5,000,000	60	360	360
Ground	<500	3	3	3
	500-9,999	3	9	9
	10,000-99,999	12	48	48
	100,000-499,999	18	72	72
	$500,000	24	96	96

THE SPECIFIC ELEMENTS REQUIRED FOR A HYDRAULIC MODELING SYSTEM SPECIFIC STUDY PLAN:

- Model must be an Extended Period Simulation (EPS) model and must simulate 24-hour variation in demand and show a consistently repeating 24-hour pattern of residence time.
- Tabular or spreadsheet data demonstrating that the model includes:
  - 75 percent of pipe volume and 50 percent of pipe length.
  - All pressure zones.
  - All 12-inch diameter and larger pipes.
  - All 8-inch and larger pipes that connect pressure zones, influence zones from different sources, storage facilities, major demand areas, pumps, and control valves, or are known or expected to be significant conveyors of water.
  - All 6-inch and larger pipes that connect remote areas of a distribution system to the main portion of the system.
  - All storage facilities with standard operations represented.
  - All active pump stations with controls and all active control valves.
- Description of calibration activities undertaken including (if calibration is complete):
  - A graph of predicted tank levels vs. measured tank levels for the storage facility with the highest residence time in each pressure zone.
  - A time series graph of the residence time at the longest residence time storage facility in the distribution system showing the predictions for the entire simulation period.
- Model output showing preliminary 24-hr average residence time predictions throughout the system.
- Timing and number of samples representative of distribution system for at least one monitoring period of TTHM and HAA5 monitoring at no less than the number of locations required under standard monitoring during the peak historical month. These samples must be taken at locations other than existing Stage 1 DBPR compliance monitoring locations.
- A description of how all requirements will be completed within 12 months of plan submission.

Peak Historical Month:

Is the month with the highest TTHM or the highest HAA5 levels or the warmest water temperature. It is meant to represent the "worst case" scenario for DBP formation.

STEP 3: PREPARE AND SUBMIT IDSE REPORT

The primary purpose of the IDSE Report is to provide EPA or the state with the system's recommendations for where and at what frequency Stage 2 DBPR compliance monitoring will be conducted.

The required elements of the IDSE Report are:

- Recommendations for Stage 2 DBPR monitoring sites and dates.
- Basis (analytical results and modeling) and justification for selection of recommended Stage 2 DBPR monitoring sites.
- TTHM and HAA5 analytical results in a tabular or spreadsheet format from all Stage 1 DBPR and SSS monitoring conducted during the period of the SSS.
- An explanation of any deviation from the approved SSS plan.

- If any of the following changed from your study plan:

    - Population served.
    - System type (subpart H or ground).
    - Distribution system schematic.

In addition, if you are conducting a Hydraulic Modeling SSS you must provide your **final calibration** information (if not already provided with the IDSE plan) and a **24-hr time series graph of residence time for all Stage 2 DBPR monitoring sites selected**. If you include the bold items above in your plan, you will not have to prepare a separate IDSE Report.

IDSE Report can be submitted the same way as the SSS Plan, as described under Step 1 of this factsheet.

STEP 4: PREPARE STAGE 2 DBPR COMPLIANCE MONITORING PLAN

The required elements of the Stage 2 DBPR compliance monitoring plan are the compliance monitoring locations and dates and compliance calculation procedures. If you decide to include the compliance calculation procedures in your IDSE Report, you will not have to prepare a separate Stage 2 DBPR compliance monitoring plan. However, if you did not include the information required for the Stage 2 DBPR compliance monitoring plan as part of your IDSE Report, your next step will be to prepare this plan before beginning Stage 2 DBPR compliance monitoring. If you are a Subpart H system serving more than 3,300 people, you must submit a copy of the monitoring plan to your state before Stage 2 DBPR compliance monitoring begins. Also, systems should check with their states in case there are state requirements, in addition to the Federal requirements, that need to be included in the IDSE Report.

ADDITIONAL GUIDANCE MATERIALS

The following guidance materials address the IDSE requirements for the Stage 2 DBPR:

- *Initial Distribution System Evaluation Guidance Manual for the Final Stage 2 Disinfectants and Disinfection Byproducts Rule* (EPA 815-B-06-002) - This manual is a comprehensive technical guidance document for all system sizes and types and all IDSE options.

- *IDSE Tool* – Is a web-based tool that walks the user through the IDSE process. A Wizard determines IDSE requirements and selects the best IDSE option for your system. The tool creates Custom Forms your system (based on population served and system type) can submit electronically to EPA's Information Processing and Management Center for EPA/state review. (Available on-line at www.epa.gov/safewater/disinfection/tools.)

For additional guidance on the Stage 2 DBPR, you may refer to the following existing and future EPA materials:

- Stage 2 DBPR Quick Reference Guides (Schedules 1 – 4).

- Simultaneous Compliance Guidance Manuals for the Stage 2 Rules (draft version anticipated mid-2006).

- Stage 2 Disinfectant and Disinfection Byproducts Rule: Small Entity Compliance Guide – One of the Simple Tools for Effective Performance (STEP) Guide Series (draft version anticipated late 2006).

- Consecutive System Guidance Manual for the Final Stage 2 Disinfectants and Disinfection Byproducts Rule (draft version anticipated late 2006).

- Operational Evaluation Guidance Manual for the Final Stage 2 Disinfectants and Disinfection Byproducts Rule (draft version anticipated late 2006).

Materials can be downloaded from www.epa.gov/safewater/disinfection/stage2, as they become available.

For additional information, please contact the Safe Drinking Water Hotline at 1-800-426-4791, send an email to stage2mdbp@epa.gov, or visit www.epa.gov/safewater/disinfection/stage2.

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Stage 2 Disinfectants and Disinfection Byproducts Rule: A Quick Reference Guide For Schedule 1 Systems

Overview of the Rule

Title	Stage 2 Disinfectants and Disinfection Byproducts Rule (Stage 2 DBPR) 71 FR 388, January 4, 2006, Vol. 71, No. 2
Purpose	To increase public health protection by reducing the potential risk of adverse health effects associated with disinfection byproducts (DBPs) throughout the distribution system. Builds on the Stage 1 Disinfectants and Disinfection Byproducts Rule (Stage 1 DBPR) by focusing on monitoring for and reducing concentrations of two classes of DBPs - TTHM and HAA5 - in drinking water.
General Description	Stage 2 DBPR requires some systems to complete an Initial Distribution System Evaluation (IDSE) to characterize DBP levels in their distribution systems and identify locations to monitor DBPs for Stage 2 DBPR compliance. The Stage 2 DBPR bases TTHM and HAA5 compliance on a locational running annual average (LRAA) calculated at each monitoring location.
Utilities Covered *	▸ All community water systems (CWSs) and nontransient noncommunity water systems (NTNCWSs) that either add a primary or residual disinfectant other than ultraviolet light, or deliver water that has been treated with a primary or residual disinfectant other than ultraviolet light. ▸ Schedule 1 includes CWSs and NTNCWSs serving 100,000 or more people OR CWSs and NTNCWSs that are part of a combined distribution system in which the largest system serves 100,000 or more people.

*** NTNCWSs serving < 10,000 people do not need to complete any of the IDSE options, but must conduct Stage 2 DBPR compliance monitoring.**

Stage 2 DBPR Regulated Contaminants

Regulated Contaminants	MCLG (mg/L)	MCL (mg/L)
Total Trihalomethanes (TTHM)		**0.080 LRAA**
Chloroform	0.07	
Bromodichloromethane	zero	
Dibromochloromethane	0.06	
Bromoform	zero	
Five Haloacetic Acids (HAA5)		**0.060 LRAA**
Monochloroacetic acid	0.07	
Dichloroacetic acid	zero	
Trichloroacetic acid	0.02	
Bromoacetic acid	-	
Dibromoacetic acid	-	

IDSE Requirements**

IDSE Option	Description
Standard Monitoring	Standard monitoring is one year of increased monitoring for TTHM and HAA5 in addition to the data being collected under Stage 1 DBPR. These data will be used with Stage 1 DBPR data to select Stage 2 DBPR TTHM and HAA5 compliance monitoring locations. Any system may conduct standard monitoring to meet the IDSE requirements of the Stage 2 DBPR.
System Specific Study (SSS)	Systems that have extensive TTHM and HAA5 data (including Stage 1 DBPR compliance data) or technical expertise to prepare a hydraulic model may choose to conduct a system specific study to select Stage 2 DBPR compliance monitoring locations.
40/30 Certification †	The term "40/30" refers to a system that during a specific time period has all individual Stage 1 DBPR compliance samples less than or equal to 0.040 mg/L for TTHM and 0.030 mg/L for HAA5 and has no monitoring violations during the same time period. These systems have no IDSE monitoring requirements, but will still need to conduct Stage 2 DBPR compliance monitoring.
Very Small System (VSS) Waiver †	Systems that serve fewer than 500 people and have eligible TTHM and HAA5 data can qualify for a VSS Waiver and would not be required to conduct IDSE monitoring. These systems have no IDSE monitoring requirements, but will still need to conduct Stage 2 DBPR compliance monitoring.
EPA has developed several tools to assist systems with complying with the Stage 2 DBPR IDSE requirements. These materials can be downloaded at www.epa.gov/safewater/disinfection/stage2.	

**** NTNCWSs serving < 10,000 people do not need to complete any of the IDSE options.**

† Systems that are notified by EPA or the state their VSS waiver or 40/30 certification has not been approved will need to complete Standard Monitoring or System Specific Study.

For additional information on the Stage 2 DBPR

Call the Safe Drinking Water Hotline at 1-800-426-4791; visit the EPA web site at www.epa.gov/safewater/disinfection/stage2; or contact your state drinking water representative.

Compliance with Stage 2 DBPR MCLs (Routine Monitoring)

Source Water Type	Population Size Category	Monitoring Frequency[1]	Total Distribution System Monitoring Locations Per Monitoring Period[2]
Subpart H	<500	per year	2
	500-3,300	per quarter	2
	3,301-9,999		2
	10,000-49,999		4
	50,000-249,999		8
	250,000-999,999		12
	1,000,000-4,999,999		16
	≥5,000,000		20
Ground Water	<500	per year	2
	500-9,999		2
	10,000-99,999	per quarter	4
	100,000-499,999		6
	≥500,000		8

Operational Evaluation

Systems must begin complying with the operational evaluation provision of the Stage 2 DBPR.

[1] All systems must monitor during month of highest DBP concentrations.

[2] Systems on quarterly monitoring must take dual sample sets every 90 days at each monitoring location, except for subpart H systems serving 500-3,300. Systems on annual monitoring and subpart H systems serving 500-3,300 are required to take individual TTHM and HAA5 samples (instead of a dual sample set) at the locations with the highest TTHM and HAA5 concentrations, respectively. If monitoring annually, only one location with a dual sample set per monitoring period is needed if highest TTHM and HAA5 concentrations occur at the same location, and month.

Critical Deadlines and Requirements

For Drinking Water Systems (Schedule 1)

January 4, 2006	Systems serving fewer than 500 people that have TTHM and HAA5 compliance data qualify for a VSS Waiver from conducting an IDSE, unless informed otherwise by U.S. EPA or state primacy agency.
October 1, 2006	Systems that do not receive a VSS Waiver must submit to the U.S EPA or state primacy agency either a: ▸ Standard monitoring plan, ▸ System specific study plan, or ▸ 40/30 certification.
October 1, 2007	Systems conducting standard monitoring or SSS begin collecting samples in accordance with their approved plan.
September 30, 2008	No later than this date, systems conducting standard monitoring or a SSS complete their monitoring or study.
January 1, 2009	No later than this date, systems conducting standard monitoring or a SSS must submit their IDSE report.
April 1, 2009	Consecutive systems must begin monitoring for chlorine or chloramines as specified under the Stage 1 DBPR.
April 1, 2012	No later than this date, systems must: ▸ Complete their Stage 2 DBPR Compliance Monitoring Plan (Systems serving more than 3,300 people must submit their Monitoring Plan to the state.)* ▸ Begin complying with monitoring requirements of the Stage 2 DBPR.†
January 2013	Systems must begin complying with rule requirements to determine compliance with the operational evaluation levels for TTHMs and HAA5s.

For States

January - June 2006	States are encouraged to inform systems serving fewer than 500 people and do not qualify for a VSS Waiver from the IDSE requirements should begin complying with standard monitoring requirements.
September 30, 2007	States must approve the system's standard monitoring plan, 40/30 certification, or system specific study plan or notify the system that the state has not completed its review.
October 4, 2007	States are encouraged to submit final primacy applications or extension requests to EPA.
January 4, 2008	Final primacy applications must be submitted to EPA, unless granted an extension.
March 31, 2009	States must approve the system's IDSE report or notify the system that the state has not completed its review of the IDSE report.
January 4, 2010	Final primacy revision applications from states with approved 2-year extensions agreements must be submitted to EPA.

* A monitoring plan is not required if the IDSE report includes all information required in the monitoring plan.
† States may allow up to an additional 24 months for compliance with MCLs for systems requiring capital improvements.

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Stage 2 Disinfectants and Disinfection Byproducts Rule: A Quick Reference Guide For Schedule 2 Systems

Overview of the Rule

Title	Stage 2 Disinfectants and Disinfection Byproducts Rule (Stage 2 DBPR) 71 FR 388, January 4, 2006, Vol. 71, No. 2
Purpose	To increase public health protection by reducing the potential risk of adverse health effects associated with disinfection byproducts (DBPs) throughout the distribution system. Builds on the Stage 1 Disinfectants and Disinfection Byproducts Rule (Stage 1 DBPR) by focusing on monitoring for and reducing concentrations of two classes of DBPs - TTHM and HAA5 - in drinking water.
General Description	Stage 2 DBPR requires some systems to complete an Initial Distribution System Evaluation (IDSE) to characterize DBP levels in their distribution systems and identify locations to monitor DBPs for Stage 2 DBPR compliance. The Stage 2 DBPR bases TTHM and HAA5 compliance on a locational running annual average (LRAA) calculated at each monitoring location.
Utilities Covered *	▸ All community water systems (CWSs) and nontransient noncommunity water systems (NTNCWSs) that either add a primary or residual disinfectant other than ultraviolet light, or deliver water that has been treated with a primary or residual disinfectant other than ultraviolet light. ▸ Schedule 2 includes CWSs and NTNCWSs serving 50,000 to 99,999 people OR CWSs and NTNCWSs that are part of a combined distribution system in which the largest system serves 50,000 to 99,999 people.

*** NTNCWSs serving < 10,000 people do not need to complete any of the IDSE options, but must conduct Stage 2 DBPR compliance monitoring.**

Stage 2 DBPR Regulated Contaminants

Regulated Contaminants	MCLG (mg/L)	MCL (mg/L)
Total Trihalomethanes (TTHM)		**0.080 LRAA**
Chloroform	0.07	
Bromodichloromethane	zero	
Dibromochloromethane	0.06	
Bromoform	zero	
Five Haloacetic Acids (HAA5)		**0.060 LRAA**
Monochloroacetic acid	0.07	
Dichloroacetic acid	zero	
Trichloroacetic acid	0.02	
Bromoacetic acid	-	
Dibromoacetic acid	-	

IDSE Requirements**

IDSE Option	Description
Standard Monitoring	Standard monitoring is one year of increased monitoring for TTHM and HAA5 in addition to the data being collected under Stage 1 DBPR. These data will be used with Stage 1 DBPR data to select Stage 2 DBPR TTHM and HAA5 compliance monitoring locations. Any system may conduct standard monitoring to meet the IDSE requirements of the Stage 2 DBPR.
System Specific Study (SSS)	Systems that have extensive TTHM and HAA5 data (including Stage 1 DBPR compliance data) or technical expertise to prepare a hydraulic model may choose to conduct a system specific study to select Stage 2 DBPR compliance monitoring locations.
40/30 Certification†	The term "40/30" refers to a system that during a specific time period has all individual Stage 1 DBPR compliance samples less than or equal to 0.040 mg/L for TTHM and 0.030 mg/L for HAA5 and has no monitoring violations during the same time period. These systems have no IDSE monitoring requirements, but will still need to conduct Stage 2 DBPR compliance monitoring.
Very Small System (VSS) Waiver†	Systems that serve fewer than 500 people and have eligible TTHM and HAA5 data can qualify for a VSS Waiver and would not be required to conduct IDSE monitoring. These systems have no IDSE monitoring requirements, but will still need to conduct Stage 2 DBPR compliance monitoring.
EPA has developed several tools to assist systems with complying with the Stage 2 DBPR IDSE requirements. These materials can be downloaded at www.epa.gov/safewater/disinfection/stage2.	

**** NTNCWSs serving < 10,000 people do not need to complete any of the IDSE options.**
† Systems that are notified by EPA or the state their VSS waiver or 40/30 certification has not been approved will need to complete Standard Monitoring or System Specific Study.

For additional information on the Stage 2 DBPR

Call the Safe Drinking Water Hotline at 1-800-426-4791; visit the EPA web site at www.epa.gov/safewater/disinfection/stage2; or contact your state drinking water representative.

Compliance with Stage 2 DBPR MCLs (Routine Monitoring)

Source Water Type	Population Size Category	Monitoring Frequency [1]	Total Distribution System Monitoring Locations Per Monitoring Period[2]
Subpart H	<500	per year	2
	500-3,300	per quarter	2
	3,301-9,999		2
	10,000-49,999		4
	50,000-249,999		8
	250,000-999,999		12
	1,000,000-4,999,999		16
	≥5,000,000		20
Ground Water	<500	per year	2
	500-9,999		2
	10,000-99,999	per quarter	4
	100,000-499,999		6
	≥500,000		8

Operational Evaluation

Systems must begin complying with the operational evaluation provision of the Stage 2 DBPR.

[1] All systems must monitor during month of highest DBP concentrations.

[2] Systems on quarterly monitoring must take dual sample sets every 90 days at each monitoring location, except for subpart H systems serving 500-3,300. Systems on annual monitoring and subpart H systems serving 500-3,300 are required to take individual TTHM and HAA5 samples (instead of a dual sample set) at the locations with the highest TTHM and HAA5 concentrations, respectively. If monitoring annually, only one location with a dual sample set per monitoring period is needed if highest TTHM and HAA5 concentrations occur at the same location, and month.

Critical Deadlines and Requirements

For Drinking Water Systems (Schedule 2)

January 4, 2006	Systems serving fewer than 500 people that have TTHM and HAA5 compliance data qualify for a VSS Waiver from conducting an IDSE, unless informed otherwise by U.S. EPA or state primacy agency.
April 1, 2007	Systems that do not receive a VSS Waiver must submit to the U.S EPA or state primacy agency either a: ▸ Standard monitoring plan, ▸ System specific study plan, or ▸ 40/30 certification.
April 1, 2008	Systems conducting standard monitoring or SSS begin collecting samples in accordance with their approved plan.
March 31, 2009	No later than this date, systems conducting standard monitoring or a SSS complete their monitoring or study.
July 1, 2009	No later than this date, systems conducting standard monitoring or a SSS must submit their IDSE report.
April 1, 2009	Consecutive systems must begin monitoring for chlorine or chloramines as specified under the Stage 1 DBPR.
October 1, 2012	No later than this date, systems must: ▸ Complete their Stage 2 DBPR Compliance Monitoring Plan (Systems serving more than 3,300 people must submit their Monitoring Plan to the state.)* ▸ Begin complying with monitoring requirements of the Stage 2 DBPR.†
July 2013	Systems must begin complying with rule requirements to determine compliance with the operational evaluation levels for TTHMs and HAA5s.

For States

January - June 2006	States are encouraged to inform systems serving fewer than 500 people and do not qualify for a VSS Waiver from the IDSE requirements should begin complying with standard monitoring requirements.
March 31, 2008	States must approve the system's standard monitoring plan, 40/30 certification, or system specific study plan or notify the system that the state has not completed its review.
October 4, 2007	States are encouraged to submit final primacy applications or extension requests to EPA.
January 4, 2008	Final primacy applications must be submitted to EPA, unless granted an extension.
September 30, 2009	States must approve the system's IDSE report or notify the system that the state has not completed its review of the IDSE report.
January 4, 2010	Final primacy revision applications from states with approved 2-year extensions agreements must be submitted to EPA.

* A monitoring plan is not required if the IDSE report includes all information required in the monitoring plan.
† States may allow up to an additional 24 months for compliance with MCLs for systems requiring capital improvements.

EPA
United States
Environmental Protection
Agency

Stage 2 Disinfectants and Disinfection Byproducts Rule: A Quick Reference Guide For Schedule 3 Systems

Overview of the Rule

Title	Stage 2 Disinfectants and Disinfection Byproducts Rule (Stage 2 DBPR) 71 FR 388, January 4, 2006, Vol. 71, No. 2
Purpose	To increase public health protection by reducing the potential risk of adverse health effects associated with disinfection byproducts (DBPs) throughout the distribution system. Builds on the Stage 1 Disinfectants and Disinfection Byproducts Rule (Stage 1 DBPR) by focusing on monitoring for and reducing concentrations of two classes of DBPs - TTHM and HAA5 - in drinking water.
General Description	Stage 2 DBPR requires some systems to complete an Initial Distribution System Evaluation (IDSE) to characterize DBP levels in their distribution systems and identify locations to monitor DBPs for Stage 2 DBPR compliance. The Stage 2 DBPR bases TTHM and HAA5 compliance on a locational running annual average (LRAA) calculated at each monitoring location.
Utilities Covered *	▸ All community water systems (CWSs) and nontransient noncommunity water systems (NTNCWSs) that either add a primary or residual disinfectant other than ultraviolet light, or deliver water that has been treated with a primary or residual disinfectant other than ultraviolet light. ▸ Schedule 3 includes CWSs and NTNCWSs serving 10,000 to 49,999 people OR CWSs and NTNCWSs that are part of a combined distribution system in which the largest system serves 10,000 to 49,999 people.

* NTNCWSs serving < 10,000 people do not need to complete any of the IDSE options, but must conduct Stage 2 DBPR compliance monitoring.

Stage 2 DBPR Regulated Contaminants

Regulated Contaminants	MCLG (mg/L)	MCL (mg/L)
Total Trihalomethanes (TTHM)		**0.080 LRAA**
Chloroform	0.07	
Bromodichloromethane	zero	
Dibromochloromethane	0.06	
Bromoform	zero	
Five Haloacetic Acids (HAA5)		**0.060 LRAA**
Monochloroacetic acid	0.07	
Dichloroacetic acid	zero	
Trichloroacetic acid	0.02	
Bromoacetic acid	-	
Dibromoacetic acid	-	

IDSE Requirements**

IDSE Option	Description
Standard Monitoring	Standard monitoring is one year of increased monitoring for TTHM and HAA5 in addition to the data being collected under Stage 1 DBPR. These data will be used with Stage 1 DBPR data to select Stage 2 DBPR TTHM and HAA5 compliance monitoring locations. Any system may conduct standard monitoring to meet the IDSE requirements of the Stage 2 DBPR.
System Specific Study (SSS)	Systems that have extensive TTHM and HAA5 data (including Stage 1 DBPR compliance data) or technical expertise to prepare a hydraulic model may choose to conduct a system specific study to select Stage 2 DBPR compliance monitoring locations.
40/30 Certification †	The term "40/30" refers to a system that during a specific time period has all individual Stage 1 DBPR compliance samples less than or equal to 0.040 mg/L for TTHM and 0.030 mg/L for HAA5 and has no monitoring violations during the same time period. These systems have no IDSE monitoring requirements, but will still need to conduct Stage 2 DBPR compliance monitoring.
Very Small System (VSS) Waiver †	Systems that serve fewer than 500 people and have eligible TTHM and HAA5 data can qualify for a VSS Waiver and would not be required to conduct IDSE monitoring. These systems have no IDSE monitoring requirements, but will still need to conduct Stage 2 DBPR compliance monitoring.

EPA has developed several tools to assist systems with complying with the Stage 2 DBPR IDSE requirements. These materials can be downloaded at www.epa.gov/safewater/disinfection/stage2.

** NTNCWSs serving < 10,000 people do not need to complete any of the IDSE options.

† Systems that are notified by EPA or the state their VSS waiver or 40/30 certification has not been approved will need to complete Standard Monitoring or System Specific Study.

For additional information on the Stage 2 DBPR

Call the Safe Drinking Water Hotline at 1-800-426-4791; visit the EPA web site at www.epa.gov/safewater/disinfection/stage2; or contact your state drinking water representative.

Compliance with Stage 2 DBPR MCLs (Routine Monitoring)

Source Water Type	Population Size Category	Monitoring Frequency[1]	Total Distribution System Monitoring Locations Per Monitoring Period[2]
Subpart H	<500	per year	2
	500-3,300	per quarter	2
	3,301-9,999	per quarter	2
	10,000-49,999	per quarter	4
	50,000-249,999	per quarter	8
	250,000-999,999	per quarter	12
	1,000,000-4,999,999	per quarter	16
	≥5,000,000	per quarter	20
Ground Water	<500	per year	2
	500-9,999	per year	2
	10,000-99,999	per quarter	4
	100,000-499,999	per quarter	6
	≥500,000	per quarter	8

Operational Evaluation

Systems must begin complying with the operational evaluation provision of the Stage 2 DBPR.

[1] All systems must monitor during month of highest DBP concentrations.

[2] Systems on quarterly monitoring must take dual sample sets every 90 days at each monitoring location, except for subpart H systems serving 500-3,300. Systems on annual monitoring and subpart H systems serving 500-3,300 are required to take individual TTHM and HAA5 samples (instead of a dual sample set) at the locations with the highest TTHM and HAA5 concentrations, respectively. If monitoring annually, only one location with a dual sample set per monitoring period is needed if highest TTHM and HAA5 concentrations occur at the same location, and month.

Critical Deadlines and Requirements

For Drinking Water Systems (Schedule 3)

January 4, 2006	Systems serving fewer than 500 people that have TTHM and HAA5 compliance data qualify for a VSS Waiver from conducting an IDSE, unless informed otherwise by U.S. EPA or state primacy agency.
October 1, 2007	Systems that do not receive a VSS Waiver must submit to the U.S EPA or state primacy agency either a: ▸ Standard monitoring plan, ▸ System specific study plan, or ▸ 40/30 certification.
October 1, 2008	Systems conducting standard monitoring or SSS begin collecting samples in accordance with their approved plan.
April 1, 2009	Consecutive systems must begin monitoring for chlorine or chloramines as specified under the Stage 1 DBPR.
September 30, 2009	No later than this date, systems conducting standard monitoring or a SSS complete their monitoring or study.
January 1, 2010	No later than this date, systems conducting standard monitoring or a SSS must submit their IDSE report.
October 1, 2013	No later than this date, systems must: ▸ Complete their Stage 2 DBPR Compliance Monitoring Plan (Systems serving more than 3,300 people must submit their Monitoring Plan to the state.)* ▸ Begin complying with monitoring requirements of the Stage 2 DBPR.†
July 2014	Systems must begin complying with rule requirements to determine compliance with the operational evaluation levels for TTHMs and HAA5s.

For States

July - December 2006	States are encouraged to inform systems serving fewer than 500 people and do not qualify for a VSS Waiver from the IDSE requirements should begin complying with standard monitoring requirements.
September 30, 2008	States must approve the system's standard monitoring plan, 40/30 certification, or system specific study plan or notify the system that the state has not completed its review.
October 4, 2007	States are encouraged to submit final primacy applications or extension requests to EPA.
January 4, 2008	Final primacy applications must be submitted to EPA, unless granted an extension.
September 30, 2010	States must approve the system's IDSE report or notify the system that the state has not completed its review of the IDSE report.
January 4, 2010	Final primacy revision applications from states with approved 2-year extensions agreements must be submitted to EPA.

* A compliance monitoring plan is not required if the IDSE report includes all information required in a Stage 2 DBPR compliance monitoring plan.
† States may allow up to an additional 24 months for compliance with MCLs for systems requiring capital improvements.

EPA United States Environmental Protection Agency

Stage 2 Disinfectants and Disinfection Byproducts Rule: A Quick Reference Guide For Schedule 4 Systems

Overview of the Rule

Title	Stage 2 Disinfectants and Disinfection Byproducts Rule (Stage 2 DBPR) 71 FR 388, January 4, 2006, Vol. 71, No. 2
Purpose	To increase public health protection by reducing the potential risk of adverse health effects associated with disinfection byproducts (DBPs) throughout the distribution system. Builds on the Stage 1 Disinfectants and Disinfection Byproducts Rule (Stage 1 DBPR) by focusing on monitoring for and reducing concentrations of two classes of DBPs - TTHM and HAA5 - in drinking water.
General Description	Stage 2 DBPR requires some systems to complete an Initial Distribution System Evaluation (IDSE) to characterize DBP levels in their distribution systems and identify locations to monitor DBPs for Stage 2 DBPR compliance. The Stage 2 DBPR bases TTHM and HAA5 compliance on a locational running annual average (LRAA) calculated at each monitoring location.
Utilities Covered *	▸ All community water systems (CWSs) and nontransient noncommunity water systems (NTNCWSs) that either add a primary or residual disinfectant other than ultraviolet light, or deliver water that has been treated with a primary or residual disinfectant other than ultraviolet light. ▸ Schedule 4 includes CWSs and NTNCWSs serving fewer than 10,000 people and not belonging to a combined distribution system in which any system serves less than 10,000 people.

*** NTNCWSs serving < 10,000 people do not need to complete any of the IDSE options, but must conduct Stage 2 DBPR compliance monitoring.**

Stage 2 DBPR Regulated Contaminants

Regulated Contaminants	MCLG (mg/L)	MCL (mg/L)
Total Trihalomethanes (TTHM)		**0.080 LRAA**
Chloroform	0.07	
Bromodichloromethane	zero	
Dibromochloromethane	0.06	
Bromoform	zero	
Five Haloacetic Acids (HAA5)		**0.060 LRAA**
Monochloroacetic acid	0.07	
Dichloroacetic acid	zero	
Trichloroacetic acid	0.02	
Bromoacetic acid	-	
Dibromoacetic acid	-	

IDSE Requirements**

IDSE Option	Description
Standard Monitoring	Standard monitoring is one year of increased monitoring for TTHM and HAA5 in addition to the data being collected under Stage 1 DBPR. These data will be used with Stage 1 DBPR data to select Stage 2 DBPR TTHM and HAA5 compliance monitoring locations. Any system may conduct standard monitoring to meet the IDSE requirements of the Stage 2 DBPR.
System Specific Study (SSS)	Systems that have extensive TTHM and HAA5 data (including Stage 1 DBPR compliance data) or technical expertise to prepare a hydraulic model may choose to conduct a system specific study to select Stage 2 DBPR compliance monitoring locations.
40/30 Certification †	The term "40/30" refers to a system that during a specific time period has all individual Stage 1 DBPR compliance samples less than or equal to 0.040 mg/L for TTHM and 0.030 mg/L for HAA5 and has no monitoring violations during the same time period. These systems have no IDSE monitoring requirements, but will still need to conduct Stage 2 DBPR compliance monitoring.
Very Small System (VSS) Waiver †	Systems that serve fewer than 500 people and have eligible TTHM and HAA5 data can qualify for a VSS Waiver and would not be required to conduct IDSE monitoring. These systems have no IDSE monitoring requirements, but will still need to conduct Stage 2 DBPR compliance monitoring.
EPA has developed several tools to assist systems with complying with the Stage 2 DBPR IDSE requirements. These materials can be downloaded at www.epa.gov/safewater/disinfection/stage2.	

**** NTNCWSs serving < 10,000 people do not need to complete any of the IDSE options.**
† Systems that are notified by EPA or the state their VSS waiver or 40/30 certification has not been approved will need to complete Standard Monitoring or System Specific Study.

For additional information on the Stage 2 DBPR

Call the Safe Drinking Water Hotline at 1-800-426-4791; visit the EPA web site at www.epa.gov/safewater/disinfection/stage2; or contact your state drinking water representative.

Compliance with Stage 2 DBPR MCLs (Routine Monitoring)

Source Water Type	Population Size Category	Monitoring Frequency[1]	Total Distribution System Monitoring Locations Per Monitoring Period[2]
Subpart H	<500	per year	2
	500-3,300	per quarter	2
	3,301-9,999	per quarter	2
	10,000-49,999	per quarter	4
	50,000-249,999	per quarter	8
	250,000-999,999	per quarter	12
	1,000,000-4,999,999	per quarter	16
	≥5,000,000	per quarter	20
Ground Water	<500	per year	2
	500-9,999	per year	2
	10,000-99,999	per quarter	4
	100,000-499,999	per quarter	6
	≥500,000	per quarter	8

Operational Evaluation

Systems must begin complying with the operational evaluation provision of the Stage 2 DBPR.

[1] All systems must monitor during month of highest DBP concentrations.

[2] Systems on quarterly monitoring must take dual sample sets every 90 days at each monitoring location, except for subpart H systems serving 500-3,300. Systems on annual monitoring and subpart H systems serving 500-3,300 are required to take individual TTHM and HAA5 samples (instead of a dual sample set) at the locations with the highest TTHM and HAA5 concentrations, respectively. If monitoring annually, only one location with a dual sample set per monitoring period is needed if highest TTHM and HAA5 concentrations occur at the same location, and month.

Critical Deadlines and Requirements

For Drinking Water Systems (Schedule 4)

January 4, 2006	Systems serving fewer than 500 people that have TTHM and HAA5 compliance data qualify for a VSS Waiver from conducting an IDSE, unless informed otherwise by U.S. EPA or state primacy agency.
April 1, 2008	Systems that do not receive a VSS Waiver must submit to the U.S EPA or state primacy agency either a: ▸ Standard monitoring plan, ▸ System specific study plan, or ▸ 40/30 certification.
April 1, 2009	Systems conducting standard monitoring or SSS begin collecting samples in accordance with their approved plan.
April 1, 2009	Consecutive systems must begin monitoring for chlorine or chloramines as specified under the Stage 1 DBPR.
March 31, 2010	No later than this date, systems conducting standard monitoring or a SSS complete their monitoring or study.
July 1, 2010	No later than this date, systems conducting standard monitoring or a SSS must submit their IDSE report.
October 1, 2013	No later than this date, systems must: ▸ Complete their Stage 2 DBPR Compliance Monitoring Plan (Systems serving more than 3,300 people must submit their Monitoring Plan to the state.)* ▸ Begin complying with monitoring requirements of the Stage 2 DBPR.†
July 2014††	Systems must begin complying with rule requirements to determine compliance with the operational evaluation levels for TTHMs and HAA5s.

For States

July - December 2006	States are encouraged to inform systems serving fewer than 500 people and do not qualify for a VSS Waiver from the IDSE requirements should begin complying with standard monitoring requirements.
March 31, 2009	States must approve the system's standard monitoring plan, 40/30 certification, or system specific study plan or notify the system that the state has not completed its review.
October 4, 2007	States are encouraged to submit final primacy applications or extension requests to EPA.
January 4, 2008	Final primacy applications must be submitted to EPA, unless granted an extension.
September 30, 2010	States must approve the system's IDSE report or notify the system that the state has not completed its review of the IDSE report.
January 4, 2010	Final primacy revision applications from states with approved 2-year extensions agreements must be submitted to EPA.

* A compliance monitoring plan is not required if the IDSE report includes all information required in a Stage 2 DBPR compliance monitoring plan.

† States may allow up to an additional 24 months for compliance with MCLs for systems requiring capital improvements. System not conducting *Cryptosporidium* monitoring under 141.701(a)(4) must begin Stage 2 DBPR Monitoring by this date. Systems conducting *Cryptosporidium* monitoring under 141.701(a)(4) or 141.701(a)(6) must begin Stage 2 DBPR Monitoring by October 1, 2014.

†† System not conducting *Cryptosporidium* monitoring under 141.701(a)(4) must comply by this date. Systems conducting *Cryptosporidium* monitoring under 141.701(a)(4) or 141.701(a)(6) must begin complying by July 2015.

Appendix D
Flowcharts

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Stage 2 DBPR Flowcharts

Chart 1 Stage 2 DBPR IDSE Requirements

Chart 2 Stage 2 DBPR Compliance for Surface Water Systems serving 10,000 or more people

Chart 3 Stage 2 DBPR Compliance for Surface Water Systems serving 500 to 9,999 people

Chart 4 Stage 2 DBPR Compliance for Surface Water Systems serving fewer than 500 people

Chart 5 Stage 2 DBPR Compliance for Ground Water Systems serving 10,000 or more people

Chart 6 Stage 2 DBPR Compliance for Ground Water Systems serving 500 to 9,999 people

Chart 7 Stage 2 DBPR Compliance for Ground Water Systems serving fewer than 500 people

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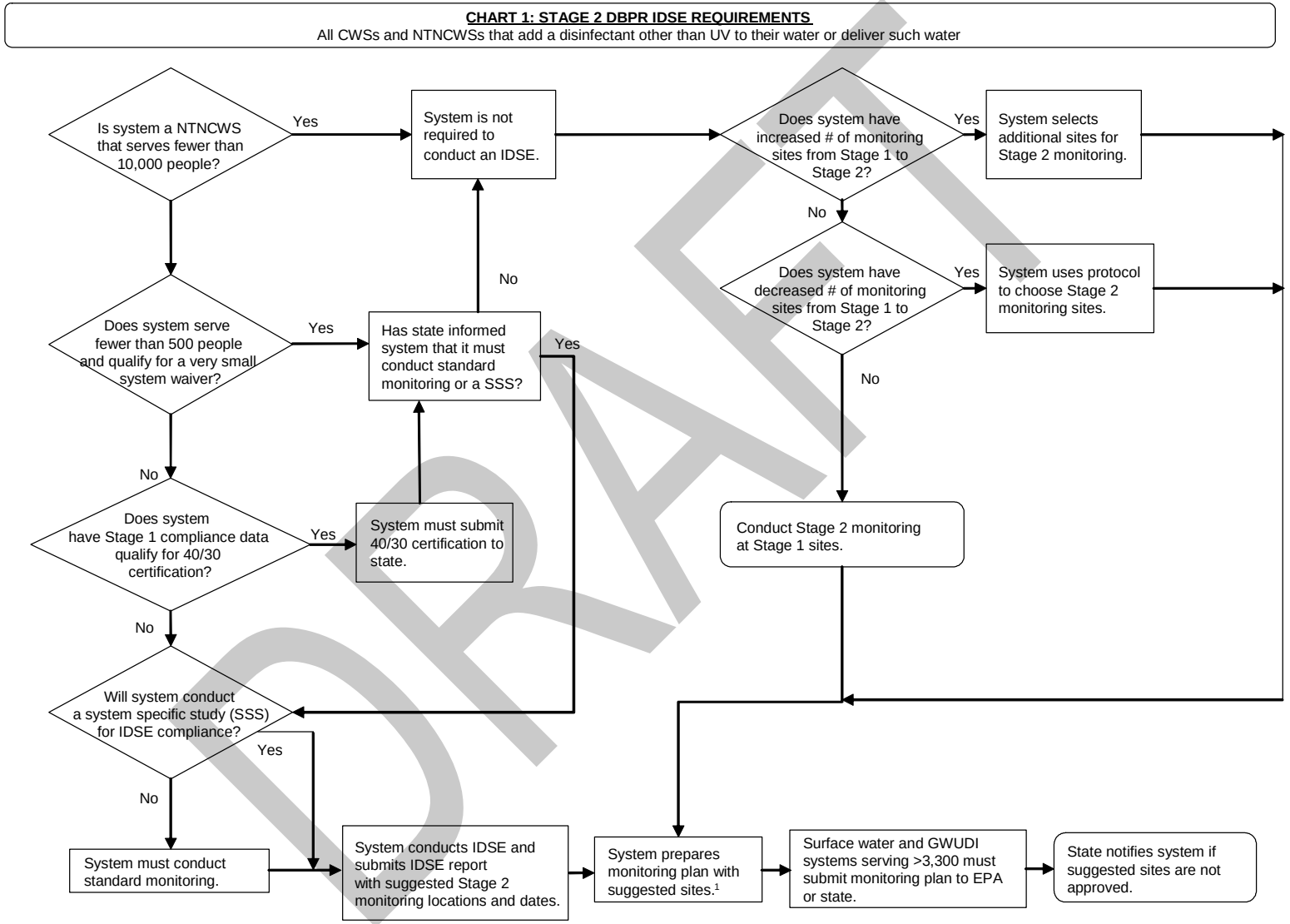
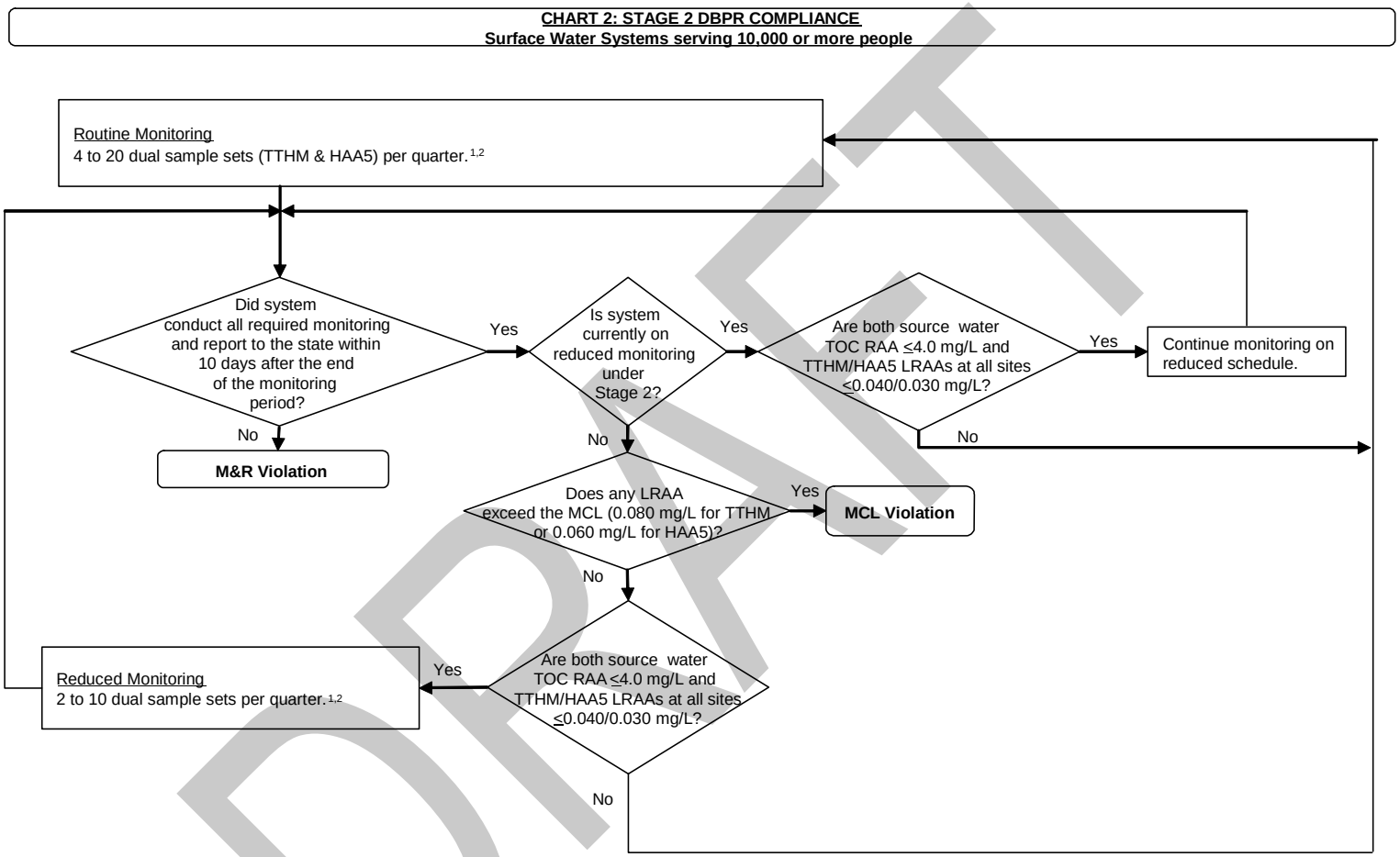


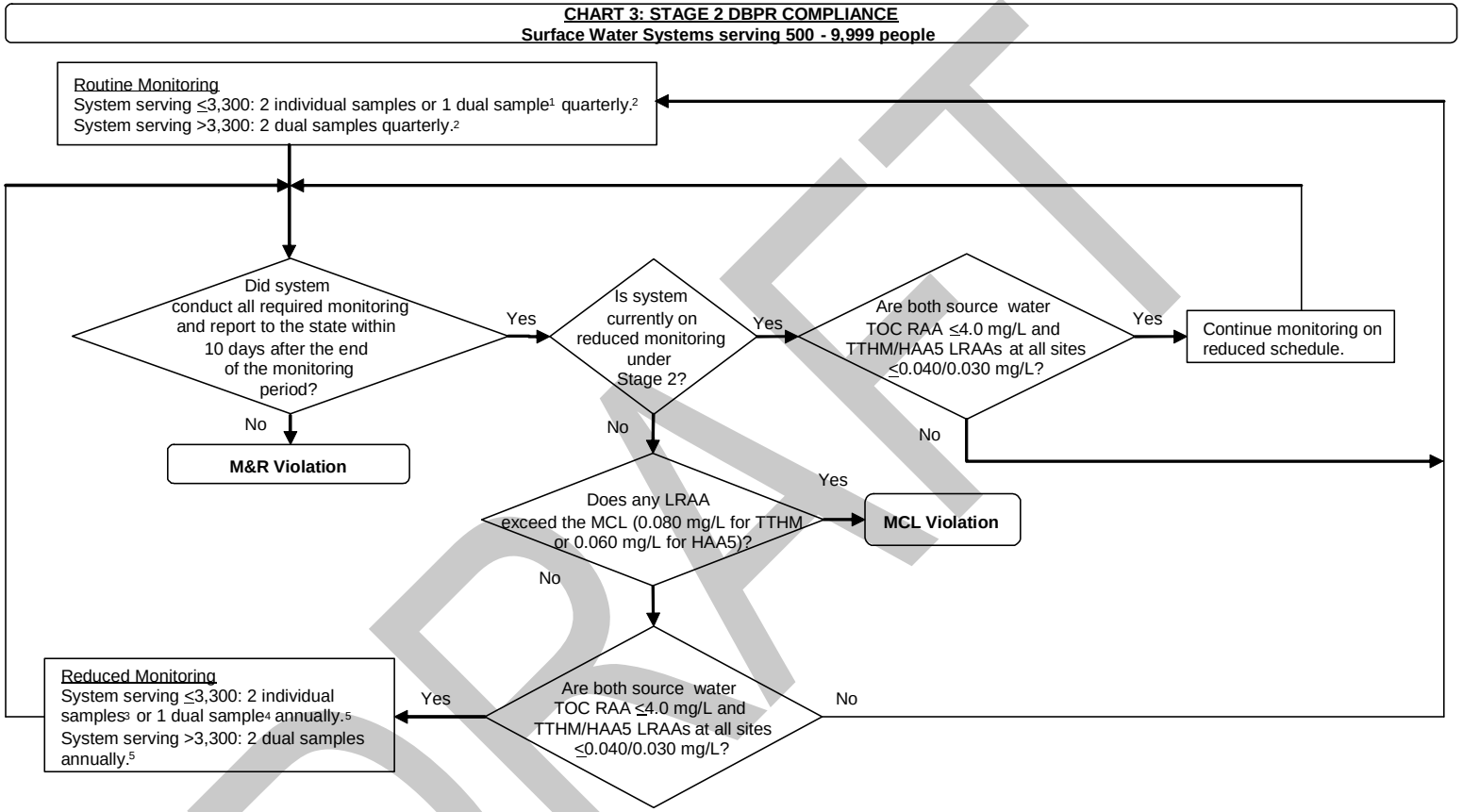
[1] Unless information required for monitoring plan is included in IDSE report

Note: Consecutive or wholesale systems that are part of a combined distribution system must monitor on the same schedule as the largest system in the combined distribution system.



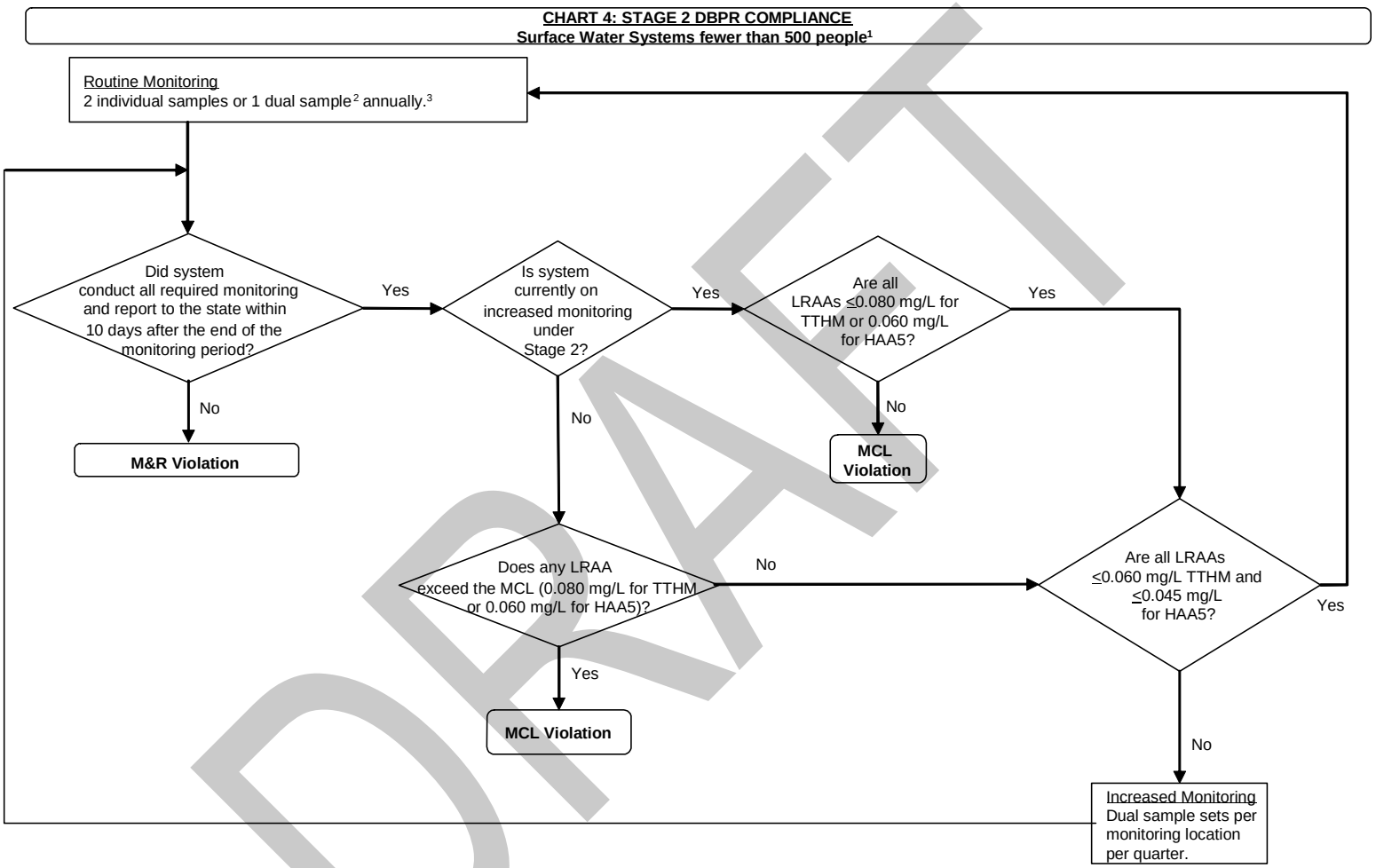
[1] Number of dual samples dependent on population served.
[2] One quarterly set must be taken during the peak month of historical DBP concentrations

Note: Consecutive or wholesale systems that are part of a combined distribution system must monitor on the same schedule as the largest system in the combined distribution system.



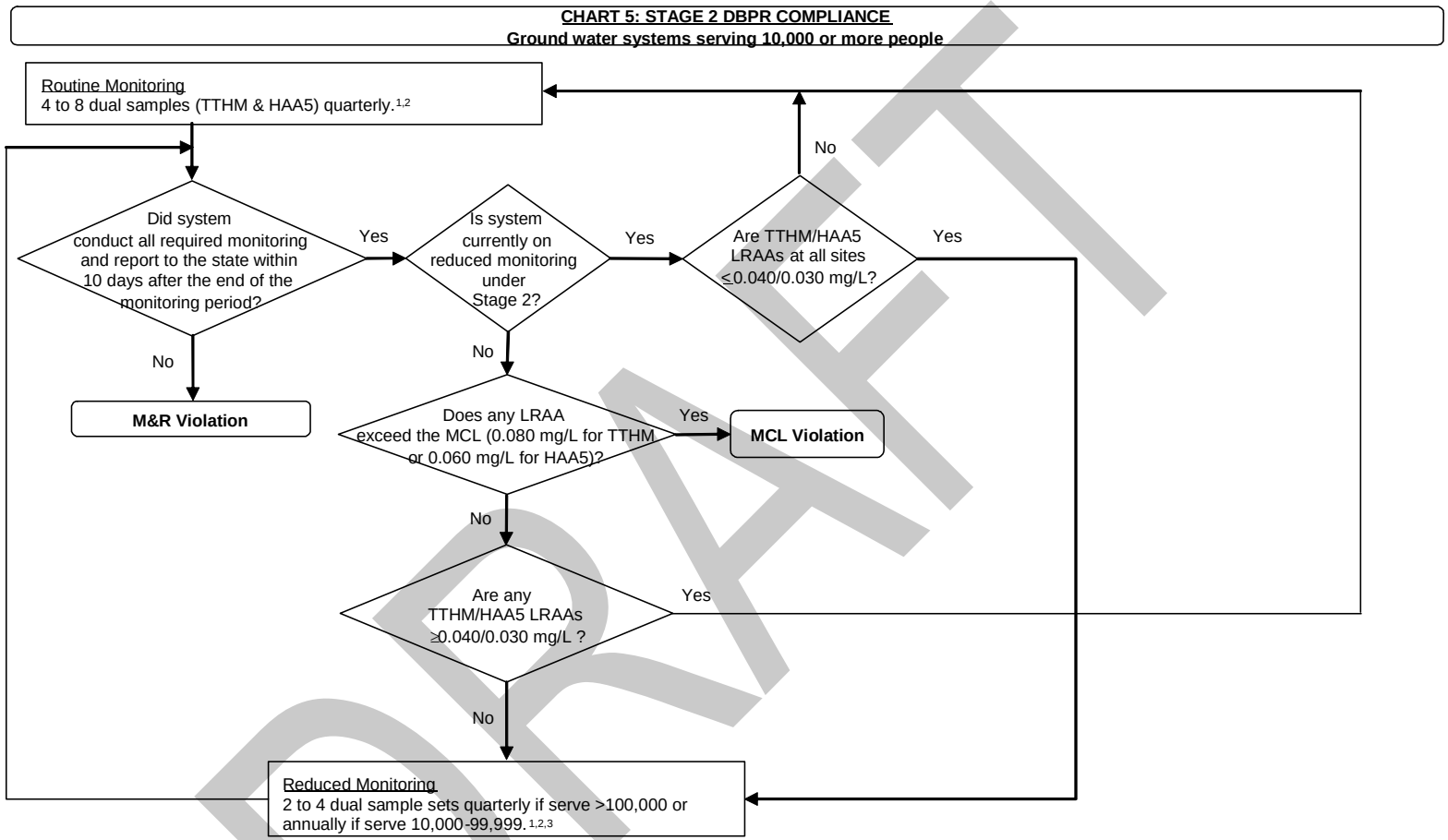
[1] If highest TTHM LRAA and highest HAA5 LRAA occur at the same location.
[2] During the month of highest DBP concentration.
[3] One sample at the location and during the quarter with the highest TTHM single measurement, and one sample at the location and during the quarter with the highest HAA5 single measurement.
[4] If highest TTHM LRAA and highest HAA5 LRAA occur at the same location and during same quarter.
[5] During quarter with highest DBP concentration.

Note: Consecutive or wholesale systems that are part of a combined distribution system must monitor on the same schedule as the largest system in the combined distribution system.



[1] Systems cannot reduce monitoring.
[2] If highest TTHM LRAA and highest HAA5 LRAA occur at the same location.
[3] During the month of highest DBP concentration.

Note: Consecutive or wholesale systems that are part of a combined distribution system must monitor on the same schedule as the largest system in the combined distribution system.

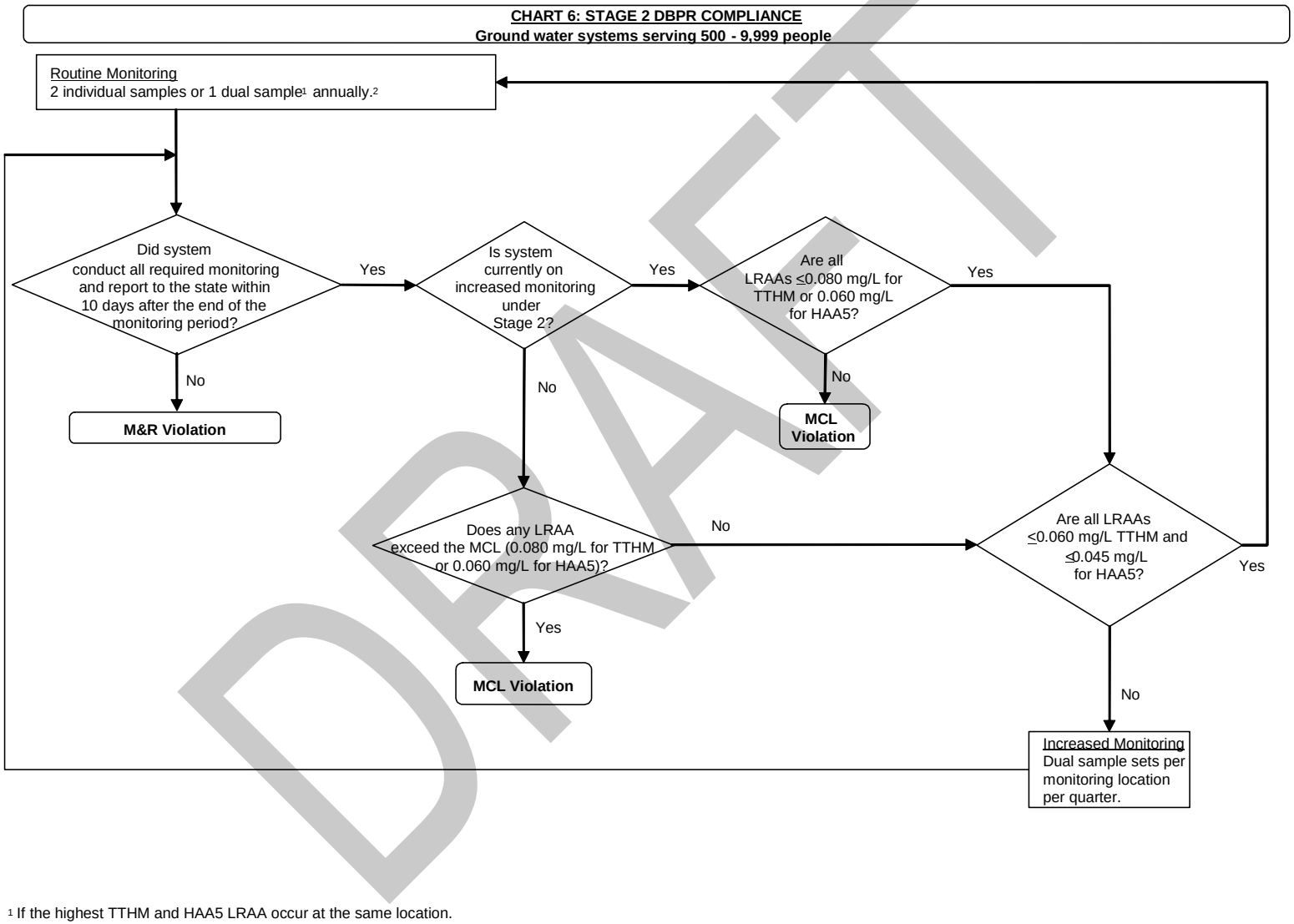


[1] Number of dual samples depends on population served.

[2] One set must be taken during the peak historical month for DBP concentrations.

[3] For systems serving 10,000-99,999, one sample must be taken at the location and during the quarter with the highest TTHM single measurement, and one sample must be taken at the location and during the quarter with the highest HAA5 single measurement.

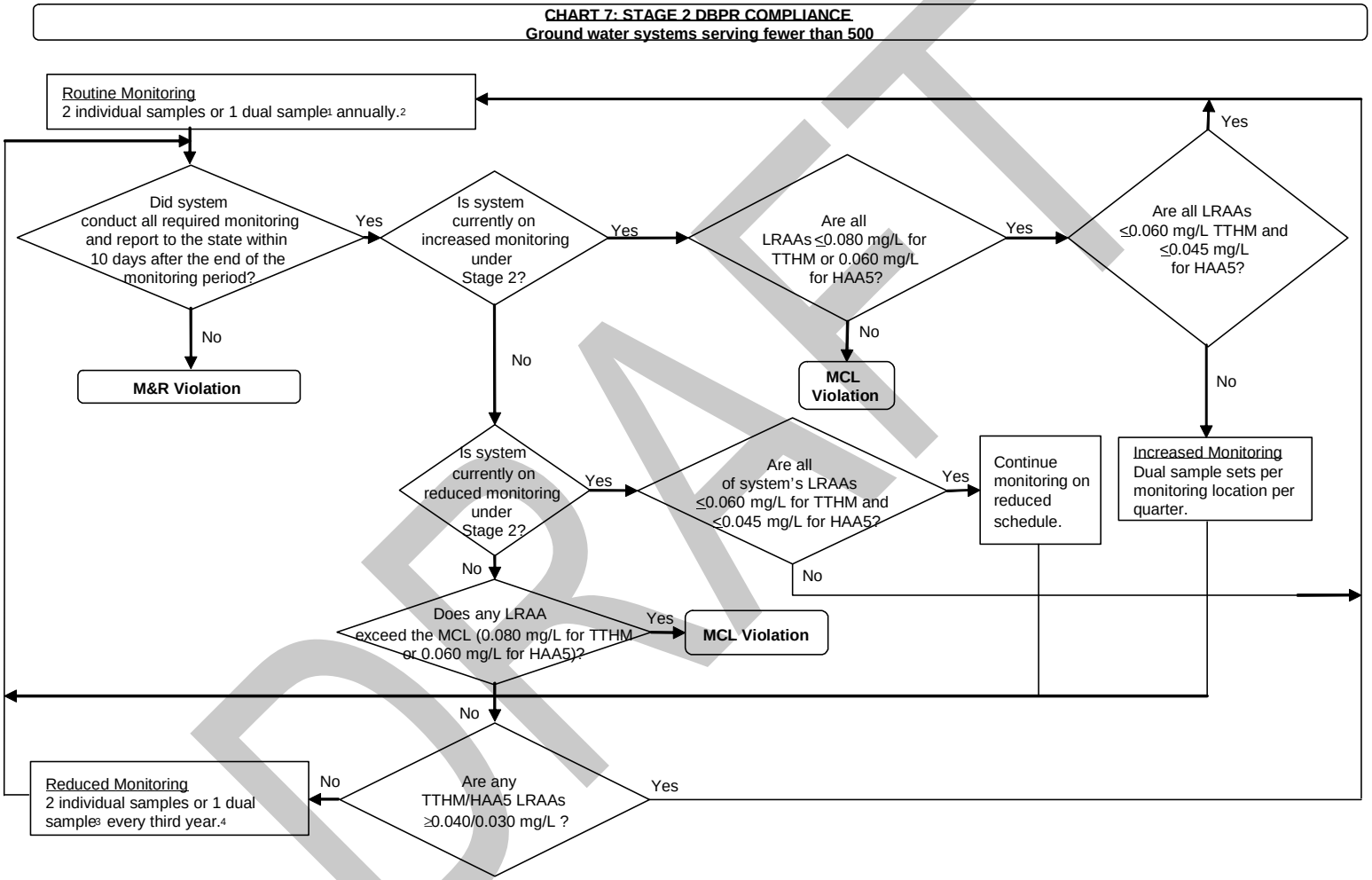
Note: Consecutive or wholesale systems that are part of a combined distribution system must monitor on the same schedule as the largest system in the combined distribution system.



[1] If the highest TTHM and HAA5 LRAA occur at the same location.

[2] During the quarter of highest DBP concentration.

Note: Consecutive or wholesale systems that are part of a combined distribution system must monitor on the same schedule as the largest system in the combined distribution system.



[1] If the highest TTHM and HAA5 LRAA occur at the same location.
[2] During the quarter with highest DBP concentration.
[3] If the highest TTHM and HAA5 LRAA occur at the same location and quarter.
[4] During the year with highest DBP concentration.

Note: Consecutive or wholesale systems that are part of a combined distribution system must monitor on the same schedule as the largest system in the combined distribution system.

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Appendix E
IDSE Forms

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IDSE Forms

Systems can use the following forms to help them prepare plans and reports for their IDSE.

Monitoring Plan Forms

Form 2: Existing Monitoring Results SSS Plan

Form 4: Modeling Study Plan

Form 6: Standard Monitoring Plan

IDSE Report Forms

Form 3: Existing Monitoring Results SSS IDSE Report

Form 5: IDSE Report for a Modeling SSS

Form 7: IDSE Report for Standard Monitoring

Forms 2 and 4 will assist systems preparing a system specific study (SSS) plan, and Form 6 will help systems preparing a standard monitoring plan. Systems conducting standard monitoring or a SSS must also submit an IDSE report. For assistance with their IDSE reports, systems completing a SSS should use Form 3 or 5 and systems conducting standard monitoring should use Form 7.

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Form 2: Existing Monitoring Results SSS Plan

I. GENERAL INFORMATION

A. PWS Information*

PWSID: _____

PWS Name: _____

PWS Address: _____

City: _____ State: _____ Zip: _____

Population Served: _____

B. Date Submitted*

System Type:	Source Water Type:	Buying / Selling Relationships:
~ CWS	~ Subpart H	~ Consecutive System
~ NTNCWS	~ Ground	~ Wholesale System
		~ Neither

C. PWS Operations

Residual Disinfectant Type: ~ Chlorine ~ Chloramines ~ Other_____

Number of Disinfected Sources: ____Surface____GWUDI____Ground____Purchased

D. Contact Person*

Name: _____

Title: _____

Phone #: _____ Fax #: _____

E-mail: _____

II. SSS REQUIREMENTS*

A. Minimum Number of Monitoring Locations _____

B. Minimum Number of Required Samples

_____ TTHM _____ HAA5

C. IDSE Schedule

~ Schedule 1 ~ Schedule 2 ~ Schedule 3 ~ Schedule 4

Form 2: Existing Monitoring Results SSS Plan

III. PEAK HISTORICAL MONTH

A. Peak Historical Month* _____

B. If Multiple Sources, Source Used to Determine Peak Historical Month (write "N/A" if only one source in your system)

_____

C. Peak Historical Month Based On (check as many as needed)

~ High TTHM ~ High HAA5 ~ Warmest Water temperature

If you used other information to select your peak historical month, explain here (*attach additional sheets if needed*)

_____

_____

_____

IV. PREVIOUSLY COLLECTED MONITORING RESULTS*

A. Where were your TTHM and HAA5 samples analyzed?

~ In-House

Is your in-house laboratory certified? ~ Yes ~ No

~ Certified Laboratory

Name of certified laboratory: _____

B. What method(s) was used to analyze your TTHM and HAA5 samples?

TTHM	HAA5
~ EPA 502.2	~ EPA 552.1
~ EPA 524.3	~ EPA 552.2
~ EPA 551.1	~ EPA 552.3
	~ SM 6251 B

Form 2: Existing Monitoring Results SSS Plan

IV. PREVIOUSLY COLLECTED MONITORING RESULTS (continued)*

C. TTHM Results

Site ID[1]	12-month period	Data Qualifies (yes/no)	Data Type	TTHM (mg/L)						LRAA
			Sample Date							
			Sample Result							
			Sample Date							
			Sample Result							
			Sample Date							
			Sample Result							
			Sample Date							
			Sample Result							
			Sample Date							
			Sample Result							
			Sample Date							
			Sample Result							

[1] *Verify that site IDs match the site IDs on your distribution system schematic.*

Attach additional sheets as needed for previously collected compliance and operational monitoring results.

Form 2: Existing Monitoring Results SSS Plan

IV. PREVIOUSLY COLLECTED MONITORING RESULTS (continued)*

C. TTHM Results

Site ID[1]	12-month period	Data Qualifies (yes/no)	Data Type	TTHM (mg/L)						LRAA
			Sample Date							
			Sample Result							
			Sample Date							
			Sample Result							
			Sample Date							
			Sample Result							
			Sample Date							
			Sample Result							
			Sample Date							
			Sample Result							
			Sample Date							
			Sample Result							

[1] *Verify that site IDs match the site IDs on your distribution system schematic.*

Attach additional sheets as needed for previously collected compliance and operational monitoring results.

Form 2: Existing Monitoring Results SSS Plan

IV. PREVIOUSLY COLLECTED MONITORING RESULTS (continued)*

D. HAA5 Results

Site ID[1]	12-month period	Data Qualifies (yes/no)	Data Type	HAA5 (mg/L)						LRAA
			Sample Date							
			Sample Result							
			Sample Date							
			Sample Result							
			Sample Date							
			Sample Result							
			Sample Date							
			Sample Result							
			Sample Date							
			Sample Result							
			Sample Date							
			Sample Result							

[1] *Verify that site IDs match the site IDs on your distribution system schematic.*

Attach additional sheets as needed for previously collected compliance and operational monitoring results.

Form 2: Existing Monitoring Results SSS Plan

IV. PREVIOUSLY COLLECTED MONITORING RESULTS (continued)*

D. HAA5 Results

Site ID[1]	12-month period	Data Qualifies (yes/no)	Data Type	HAA5 (mg/L)						LRAA
			Sample Date							
			Sample Result							
			Sample Date							
			Sample Result							
			Sample Date							
			Sample Result							
			Sample Date							
			Sample Result							
			Sample Date							
			Sample Result							
			Sample Date							
			Sample Result							

[1] *Verify that site IDs match the site IDs on your distribution system schematic.*

Attach additional sheets as needed for previously collected compliance and operational monitoring results.

Form 2: Existing Monitoring Results SSS Plan

V. CERTIFICATION OF DATA*

I hereby certify that:

- The reported monitoring results include all compliance and non-compliance results generated during the time period beginning with the first reported result and ending with the most recent Stage 1 DBPR results.
- The samples are representative of the entire distribution system.
- Treatment and the distribution system have not changed significantly since the samples were collected.

Signature: _____

Date: _____

VI. PROPOSED SSS MONITORING SCHEDULE*

Skip if you are submitting your IDSE Report at the same time as your plan

SSS Site ID (from map) [1]	Projected Sampling Date (date or week) [2]					
	period 1	period 2	period 3	period 4	period 5	period 6

[1] *Verify that site IDs match IDs on your distribution system schematic (See Section VII of this form). Attach additional copies of this sheet if necessary.*

[2] *period = monitoring period. Can list exact date or week (e.g., week of 7/9/07)*

Form 2: Existing Monitoring Results SSS Plan

VII. DISTRIBUTION SYSTEM SCHEMATIC*

ATTACH a schematic of your distribution system.

Distribution system schematics are not confidential and should not contain information that poses a ***security risk*** to your system. EPA recommends that you use one of two options:

Option 1: Distribution system schematic with no landmarks or addresses indicated. Show locations of sources, entry points, storage facilities, operational monitoring locations, and Stage 1 compliance monitoring locations (required). Also include pressure zone boundaries and locations of pump stations. Provide map scale.

Option 2: City map without locations of pipes indicated. Show locations of sources, entry points, storage facilities, operational monitoring locations, and Stage 1 compliance monitoring locations (required). Also include boundaries of the distribution system, pressure zone boundaries and locations of pump stations. Provide map scale.

VIII. ATTACHMENTS

~ Additional sheets for explaining how you selected the peak historical month (Section III).

~ Additional sheets for previously collected monitoring results (Section IV).

~ Additional sheets for proposed monitoring dates (Section VI).

~ Distribution system schematic* (Section VII).

Total Number of Pages in Your Plan: _____

Note: Fields with an asterisk (*) are required by the Stage 2 DBPR.

Form 3: IDSE Report for an Existing Monitoring Results SSS

I. GENERAL INFORMATION

(*Skip this section if you are submitting the plan and report at the same time*)

A. PWS Information*

PWSID: _____

PWS Name: _____

PWS Address: _____

City: _____ State: _____ Zip: _____

Population Served: _____

B. Date Submitted*

System Type:	Source Water Type:	Buying / Selling Relationships:
~ CWS	~ Subpart H	~ Consecutive System
~ NTNCWS	~ Ground	~ Wholesale System
		~ Neither

C. PWS Operations

Residual Disinfectant Type: ~ Chlorine ~ Chloramines ~ Other _____

Number of Disinfected Sources: ___Surface ___GWUDI ___Ground ___Purchased

D. Contact Person*

Name: _____

Title: _____

Phone #: _____ Fax #: _____

E-mail: _____

II. STAGE 2 DBPR REQUIREMENTS*

A. Number of Required Stage 2 DBPR Compliance Monitoring Sites _____ TOTAL

_____ Highest TTHM _____ Stage 1 DBPR _____ Highest HAA5

Form 3: IDSE Report for an Existing Monitoring Results SSS

II. STAGE 2 DBPR REQUIREMENTS (continued)*

B. IDSE Schedule

~ Schedule 1

~ Schedule 2

~ Schedule 3

~ Schedule 4

C. Required Stage 2 DBPR Compliance Monitoring Frequency

~ During peak historical month (1 monitoring period)

~ Every 90 days (4 monitoring periods)

III. ADDITIONAL SSS AND STAGE 1 COMPLIANCE MONITORING RESULTS*
(Skip this section if you are submitting the plan and report at the same time)

A. Where were your TTHM and HAA5 samples analyzed?

~ In-House

Is your in-house laboratory certified? ~ Yes ~ No

~ Certified Laboratory

Name of certified laboratory: _____

B. What method(s) was used to analyze your TTHM and HAA5 samples?

TTHM	HAA5
~ EPA 502.2	~ EPA 552.1
~ EPA 524.3	~ EPA 552.2
~ EPA 551.1	~ EPA 552.3
	~ SM 6251 B

Form 3: IDSE Report for an Existing Monitoring Results SSS

III. ADDITIONAL SSS AND STAGE 1 DBPR MONITORING RESULTS (Continued)*

C. TTHM Results

Site ID[1]	12-month period	Data Qualifies (yes/no)	Data Type	TTHM (mg/L)						LRAA
			Sample Date							
			Sample Result							
			Sample Date							
			Sample Result							
			Sample Date							
			Sample Result							
			Sample Date							
			Sample Result							
			Sample Date							
			Sample Result							
			Sample Date							
			Sample Result							
			Sample Date							
			Sample Result							
			Sample Date							
			Sample Result							

[1] *Verify that site IDs match the site IDs in your SSS Plan.*

Attach additional sheets as needed for SSS and Stage 1 DBPR results.

Form 3: IDSE Report for an Existing Monitoring Results SSS

III. ADDITIONAL SSS AND STAGE 1 DBPR MONITORING RESULTS (Continued)*

D. HAA5 Results

Site ID[1]	12-month period	Data Qualifies (yes/no)	Data Type	HAA5 (mg/L)						LRAA
			Sample Date							
			Sample Result							
			Sample Date							
			Sample Result							
			Sample Date							
			Sample Result							
			Sample Date							
			Sample Result							
			Sample Date							
			Sample Result							
			Sample Date							
			Sample Result							
			Sample Date							
			Sample Result							
			Sample Date							
			Sample Result							

[1] *Verify that site IDs match the site IDs in your SSS Plan.*

Attach additional sheets as needed for SSS and Stage 1 DBPR results.

Form 3: IDSE Report for an Existing Monitoring Results SSS

Page 5 of 7

IV. JUSTIFICATION OF STAGE 2 DBPR COMPLIANCE MONITORING SITES*

Stage 2 Compliance Monitoring Site ID	**Site Type**	**Justification**
	~ Highest TTHM ~ Highest HAA5 ~ Stage 1 DBPR	
	~ Highest TTHM ~ Highest HAA5 ~ Stage 1 DBPR	
	~ Highest TTHM ~ Highest HAA5 ~ Stage 1 DBPR	
	~ Highest TTHM ~ Highest HAA5 ~ Stage 1 DBPR	
	~ Highest TTHM ~ Highest HAA5 ~ Stage 1 DBPR	
	~ Highest TTHM ~ Highest HAA5 ~ Stage 1 DBPR	
	~ Highest TTHM ~ Highest HAA5 ~ Stage 1 DBPR	
	~ Highest TTHM ~ Highest HAA5 ~ Stage 1 DBPR	

Attach additional copies of this sheet if you need more room.

Form 3: IDSE Report for an Existing Monitoring Results SSS

V. PEAK HISTORICAL MONTH

A. Peak Historical Month*_____

B. Is Your Peak Historical Month the Same as in Your SSS Plan?

~ Yes ~ No

If no, explain how you selected your new peak historical month *(attach additional sheets if needed*):

_____

_____

_____

_____

_____

VI. PROPOSED STAGE 2 DBPR COMPLIANCE MONITORING SCHEDULE*

Stage 2 Compliance Monitoring Site ID	Projected Sampling Date (date or week)[1]			
	period 1	period 2	period 3	period 4

[1] *period = monitoring period. Complete for the number of monitoring periods from Section II.C.*

Attach additional copies of this sheet if you need more room.

Form 3: IDSE Report for an Existing Monitoring Results SSS

VII. DISTRIBUTION SYSTEM SCHEMATIC*
(Skip this section if you are submitting the plan and report at the same time)

ATTACH a schematic of your distribution system if it has changed since you submitted your Existing Monitoring Results SSS Plan (Form 2).

VIII. ATTACHMENTS

~ Additional sheets for Additional SSS Monitoring Results (Section III).

~ Additional sheets for Stage 2 DBPR Monitoring Sites (Section IV). **REQUIRED if you are a subpart H system serving more than 249,999 people**.

~ Additional sheets for explaining how you selected the peak historical month (Section V).

~ Additional sheets for proposed compliance monitoring dates (Section VI). **REQUIRED if you are a subpart H system serving more than 249,999 people**.

~ Explanation of deviations from approved study plan.

~ Distribution system schematic* (Section VII). **REQUIRED if it has changed from your approved SSS plan**.

~ Compliance calculation procedures (for Stage 2 Compliance Monitoring Plan).

Total Number of Pages in Your Report: _____

Note: Fields with an asterisk(*) are required by the Stage 2 DBPR.

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Form 4: Modeling Study Plan

I. GENERAL INFORMATION

A. PWS Information*

B. Date Submitted* _____

PWSID: _____

PWS Name: _____

PWS Address: _____

City: _____ State: _____ Zip: _____

Population Served: _____

System Type:	Source Water Type:	Buying / Selling Relationships:
~ CWS	~ Subpart H	~ Consecutive System
~ NTNCWS	~ Ground	~ Wholesale System
		~ Neither

C. PWS Operations

Residual Disinfectant Type: ~ Chlorine ~ Chloramines ~ Other:_____

Number of Disinfected Sources: ___ Surface ___GWUDI ____ Ground ___ Purchased

Name: _____

Title: _____

Phone #: _____ Fax #: _____

E-mail: _____

II. IDSE REQUIREMENTS*

A. SSS Monitoring	B. Schedule	C. SSS Monitoring Frequency
Number of Samples per Monitoring Period _____		~ During peak month of TTHM formation (1 monitoring period)
	~ Schedule 1	
Number of Monitoring Periods _____	~ Schedule 2	
	~ Schedule 3	~ Additional (describe) _____
Total _____	~ Schedule 4	_____

Form 4: Modeling Study Plan

III. MODEL DESCRIPTION

A. Answer Yes or No to the following questions*
(provide documentation in attached sheets)

1.	Is your model an Extended Period Simulation model?	Y / N
2.	Does your model meet the minimum requirements described below? Attach tables or spreadsheets to demonstrate that your model meets these requirements.	
	Include 75% of pipe volume	Y / N
	Include 50% of pipe length	Y / N
	Include all pressure zones	Y / N
	Include all pipes 12" and larger	Y / N
	Include all 8" and larger pipes that connect pressure zones, influence zones from different sources, storage facilities, major demand areas, pumps, and control valves, or are known or expected to be significant conveyors of water	Y / N
	Include all 6" and larger pipes that connect remote areas of a distribution system to the main portion of the system	Y / N
	Include all storage facilities with standard operations represented in the model	Y / N
	Include all active pump stations with realistic controls	Y / N
	Include all active control valves	Y / N
3.	Is your model (or will it be) calibrated to simulate actual water levels at all storage facilities and represent the current distribution system configuration during the period of high TTHM formation?	Y / N
4.	If calibration is complete, does the model simulate 24 hour variation in demand and show a consistently repeating 24 hour pattern of residence time?	Y / N

B. Provide a history of your model development and calibration*, including dates
(attach additional sheets if needed)

_____

_____

Form 4: Modeling Study Plan

III. MODEL DESCRIPTION (Continued)

C. How was demand data assigned to the model? *(attach additional sheets if needed)*

1.	What method was used to assign demands throughout the system?	
2.	How did you estimate diurnal demand variation? How did you determine total system demand?	
3.	How many demand categories did you use?	
4.	How did you address large water users?	

D. Describe all calibration activities* If your model is not currently calibrated, describe how calibration will be completed within 12 months of the required plan submission date using the questions 1-8 as guidance *(attach additional sheets if needed).*

1.	When was the model last calibrated?	
2.	What types of data were used in the calibration?	
3.	When was the calibration data collected?	
4.	What field tests have been performed to collect calibration data?	

Form 4: Modeling Study Plan

III. MODEL DESCRIPTION (Continued)

D. (Continued)

5.	How did you determine friction factors (C-factors)?	
6.	Was the calibration completed for the peak month for TTHM formation? If not, was the model performance verified for the peak month for TTHM formation?	
7.	How well do actual tank levels correlate with predicted tank levels during the peak month for TTHM formation? **See Attachments (Section VIII) for additional submission requirements.**	
8.	If you are using a water quality model, what parameters are modeled? How was the model calibrated?	

IV. PEAK MONTH FOR TTHM FORMATION

A. Peak Month For TTHM Formation* _____

B. Justification of Peak Month for TTHM Formation

Describe how your system determined which month is the peak month for TTHM formation (*attach additional sheets if needed*):

_____

_____

_____

_____

_____

_____

Form 4: Modeling Study Plan

III. MODELING INFORMATION *

How was the SSS modeling performed? *(attach additional sheets as needed)*

1.	Was modeling done for the operating conditions during the peak month for TTHM formation?	
2.	How were operational controls represented in the model?	
3.	How was water age simulated during the peak month for TTHM formation (time steps, length of simulation, etc.)? If not yet done, indicate how this will be addressed in the IDSE report.	
4.	What are the average water age results for your distribution system? **See Attachments (Section VIII) for additional submission requirements.**	

VI. PLANNED STAGE 1 DBPR COMPLIANCE MONITORING SCHEDULE*

Stage 1 DBPR Monitoring Site ID (from map) [1]	Projected Sampling Date (date or week) [2]			
	Period 1	Period 2	Period 3	Period 4

[1] *Verify that site IDs match IDs on your distribution system schematic (See Section VII of this form). Attach additional copies if you are required to monitor at more than 8 Stage 1 DBPR sites.*

[2] *period = monitoring period. Complete for the number of periods in which you must conduct Stage 1 DBPR monitoring during IDSE monitoring. Can list exact date or week (e.g., week of 7/9/07).*

Form 4: Modeling Study Plan

VII. DISTRIBUTION SYSTEM SCHEMATIC*

ATTACH a schematic of your distribution system.

Distribution system schematics are not confidential and should not contain information that poses a ***security risk*** to your system. EPA recommends that you submit the following:

Distribution system schematic with no landmarks or addresses indicated. Show locations of sources, entry points, storage facilities, locations of completed monitoring, and Stage 1 compliance monitoring locations (required). Also include pressure zone boundaries and locations of pump stations. Provide map scale.

VIII. ATTACHMENTS

~ Distribution System Schematic* (Section VII).

~ Tabular or spreadsheet documentation that your model meets minimum requirements***** (Section III.A).

~ Additional sheets for explaining your model (Section III.B).

~ Graph of predicted tank levels vs. measured tank levels for the storage facility with the highest residence time in each pressure zone* (Section III.D). **Required if calibration is complete.**

~ Time series graph of water age at the longest residence time storage facility in the distribution system showing the predictions for the entire EPS simulation period* (Section V). **Required if calibration is complete.**

~ Additional sheets for explaining how you selected the peak historic month for TTHM formation (Section IV).

~ Model output showing preliminary 24 hour average water age predictions for all nodes throughout the distribution system* (Required for all submissions. If your model is calibrated, this should be your final water age predictions.) (Section V).

~ Additional sheets describing the planned Stage 1 DBPR Compliance Monitoring Schedule (Section VI).

Total Number of Pages in Your Plan _____

Note: All items marked with an asterisk (*) are required by the rule.

Form 5: IDSE Report for a Modeling SSS

I. GENERAL INFORMATION

(Skip this section if you are submitting the plan and report at the same time)

A. PWS Information*

PWSID: _____

PWS Name: _____

PWS Address: _____

City: _____ State: _____ Zip: _____

Population Served: _____

B. Date Submitted*

System Type:	Source Water Type:	Buying / Selling Relationships:
~ CWS	~ Subpart H	~ Consecutive System
~ NTNCWS	~ Ground	~ Wholesale System
		~ Neither

C. PWS Operations

Residual Disinfectant Type: ~ Chlorine ~ Chloramines ~ Other:_____

Number of Disinfected Sources: ___ Surface ___GWUDI ___Ground ___Purchased

D. Contact Person*

Name: _____

Title: _____

Phone Number: ___ Fax:

E-mail: _____

II. SSS AND STAGE 2 DBPR REQUIREMENTS*

A. Number of Required Stage 2 DBPR Compliance Monitoring Sites _____ TOTAL

Highest TTHM: _____ Stage 1 DBPR: _____

Highest HAA5: _____

B. IDSE Schedule

~ Schedule 1

~ Schedule 2

~ Schedule 3

~ Schedule 4

C. Stage 2 DBPR Compliance Monitoring Frequency

~ Once during peak historical month

~ Every 90 days (4 monitoring periods)

D. Number of Required SSS Samples

_____ TOTAL

Form 5: IDSE Report for a Modeling SSS

III. MODELING INFORMATION

(Skip this section if you submitted a modeling study plan with an approved model calibration and your information has not changed, or if you are submitting your plan and report at the same time)

A. How was demand data assigned to the model? (*attach additional sheets if needed*)

1.	What method was used to assign demands throughout the system?	
2.	How did you estimate diurnal demand variation? How did you determine total system demand?	
3.	How many demand categories did you use?	
4.	How did you address large water users?	

B. Describe all calibration activities undertaken* (*attach additional sheets if needed*)

1.	When was the model last calibrated?	
2.	What types of data were used in the calibration?	
3.	When was the calibration data collected?	
4.	What field tests have been performed to collect calibration data?	

Form 5: IDSE Report for a Modeling SSS

III. MODELING INFORMATION (Continued)

5.	How did you determine friction factors (C-factors)?	
6.	Was the calibration completed for the peak month for TTHM formation? If not, was the model performance verified for the peak month for TTHM formation?	
7.	How well do actual tank levels correlate with predicted tank levels during the peak month for TTHM formation? **Submit a graph of predicted tank levels vs. measured tank levels for the storage facility with the highest water age in each pressure zone.***	
8.	If you are using a water quality model, what parameters are modeled? How was the model calibrated?	

Form 5: IDSE Report for a Modeling SSS

III. MODELING INFORMATION (Continued)

C. How was the SSS modeling performed?* (*attach additional sheets as needed*)

1.	Was modeling done for the operating conditions during the peak month for TTHM formation*?	
2.	How were operational controls represented in the model?	
3.	How was water age simulated during the peak month for TTHM formation (time steps, length of simulation, etc.)?	
4.	What are the average water age results for your distribution system? **Submit final model output showing 24-hour average residence time throughout the distribution system*.** **Submit graph of water age at the longest residence time storage facility in the distribution system showing the predictions for the entire EPS simulation period*.**	

Form 5: IDSE Report for a Modeling SSS

IV. SSS MONITORING LOCATION SELECTION

How were the SSS monitoring locations selected? *(attach additional sheets as needed)*

1.	What model results were used as the basis for selection?	
2.	What criteria were used in selecting average residence time, high TTHM, and high HAA5 sites?	
3.	What additional data was used in the analysis, and how was it used?	
4.	How did you look at practical considerations like accessibility of sampling locations?	
5.	How did you verify that your selected sampling locations corresponded to the selected node in your model?	

Form 5: IDSE Report for a Modeling SSS

V. SSS AND STAGE 1 DBPR COMPLIANCE MONITORING RESULTS*

A. TTHM Results

Site ID & Category	Data Type	TTHM (mg/L)				LRAA
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					

Attach additional sheets as needed for SSS and Stage 1 DBPR results.

Form 5: IDSE Report for a Modeling SSS

V. SSS AND STAGE 1 DBPR COMPLIANCE MONITORING RESULTS* (Continued)

B. HAA5 Results

Site ID & Category	Data Type	HAA5 (mg/L)				LRAA
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					
	Sample Date					
	Sample Result					

Attach additional sheets as needed for SSS and Stage 1 DBPR results.

Form 5: IDSE Report for a Modeling SSS

V. SSS AND STAGE 1 DBPR COMPLIANCE MONITORING RESULTS* (Continued)

C. Where were your TTHM and HAA5 samples analyzed?

~ In-House

Is your in-house laboratory certified? ~ Yes ~ No

~ Certified Laboratory

Name of certified laboratory: _____

D. What method(s) was used to analyze your TTHM and HAA5 samples?

TTHM	HAA5	
~ EPA 502.2	~ EPA 552.1	~ EPA 552.2
~ EPA 524.3	~ EPA 552.3	~ SM 6251 B
~ EPA 551.1		

VI. SELECTION OF STAGE 2 DBPR COMPLIANCE MONITORING LOCATIONS

Describe the comparison of sampling and modeling results (*attach additional sheets as needed*):

1.	How well did the sampling results correspond to the modeling results?	
2.	For samples that did not match well with model results, what follow-up investigations were performed?	
3.	Were additional samples collected? (Include data on table in Section IV)	
4.	**Submit a graph of water age versus time for each selected sampling location*.**	

Form 5: IDSE Report for a Modeling SSS

Page 9 of 11

VII. JUSTIFICATION OF STAGE 2 DBPR COMPLIANCE MONITORING SITES*

Stage 2 Compliance Monitoring Site ID	**Site Type**	**Justification**
	~ Highest TTHM ~ Highest HAA5 ~ Stage 1 DBPR	
	~ Highest TTHM ~ Highest HAA5 ~ Stage 1 DBPR	
	~ Highest TTHM ~ Highest HAA5 ~ Stage 1 DBPR	
	~ Highest TTHM ~ Highest HAA5 ~ Stage 1 DBPR	
	~ Highest TTHM ~ Highest HAA5 ~ Stage 1 DBPR	
	~ Highest TTHM ~ Highest HAA5 ~ Stage 1 DBPR	
	~ Highest TTHM ~ Highest HAA5 ~ Stage 1 DBPR	
	~ Highest TTHM ~ Highest HAA5 ~ Stage 1 DBPR	

Attach additional copies of this sheet if you need more room.

Form 5: IDSE Report for a Modeling SSS

VIII. PEAK HISTORICAL MONTH

A. Peak Historical Month* _____

B. Is Your Peak Historical Month the Same as your Peak Month in Your Modeling Study Plan?

~ Yes ~ No

If no, explain how you selected your new peak historical month *(attach additional sheets if needed)*:

_____

_____

_____

_____

_____

IX. PROPOSED STAGE 2 COMPLIANCE MONITORING SCHEDULE*

Stage 2 Compliance Monitoring Site ID	Projected Sampling Date (date or week)[1]			
	period 1	period 2	period 3	period 4

[1] *period = monitoring period. Complete for the number of monitoring periods from Section II.C.*

Attach additional copies of this sheet if you need more room.

Form 5: IDSE Report for a Modeling SSS

X. DISTRIBUTION SYSTEM SCHEMATIC*

*(Skip this section if you submitted a modeling study plan and your distribution system schematic **was complete** and has not changed from your approved modeling study plan, or if you are submitting the plan and report at the same time*)

ATTACH a schematic of your distribution system. If your schematic has changed or if you did not show your SSS monitoring locations on the distribution system schematic you submitted with your model study plan (Form 4), you must submit a revised distribution system schematic.

XI. ATTACHMENTS

- ~ Tabular or spreadsheet documentation that your model meets minimum calibration requirements if updated since approved modeling study plan* (Section III).
- ~ Additional sheets for explaining model information/results, including required graphs if not submitted as part of an approved modeling study plan* (Section III).
- ~ Additional sheets for sampling results, if needed (Section V).
- ~ Additional sheets for selection of Stage 2 DBPR compliance monitoring sites (Section VI).
- ~ Graph of water age versus time for all Stage 2 DBPR sites selected* (Section VI).
- ~ Additional sheets for justification of Stage 2 DBPR Compliance Monitoring Sites, if needed (Section VII). **REQUIRED if you are a subpart H system serving more than 249,999 people**.
- ~ Additional sheets for explaining how you selected the peak historical month (Section VIII).
- ~ Additional sheets for proposed compliance monitoring schedule (Section IX). **REQUIRED if you are a subpart H system serving more than 249,999 people**.
- ~ Explanation of deviations from approved study plan.
- ~ Distribution system schematic* (Section X). **REQUIRED if it has changed from your approved model study plan or if monitoring locations were not shown**.
- ~ Compliance calculation procedures (for Stage 2 Compliance Monitoring Plan).

Total Number of Pages in Your Report: _____

Note: All items marked with an asterisk (*) are required by the rule.

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Form 6: Standard Monitoring Plan

I. GENERAL INFORMATION

A. PWS Information*

B. Date Submitted* _____

PWSID: _____

PWS Name: _____

PWS Address: _____

City: _____ State: _____ Zip: _____

Population Served: _____

System Type:	Source Water Type:	Buying / Selling Relationships:
~ CWS	~ Subpart H	~ Consecutive System
~ NTNCWS	~ Ground	~ Wholesale System
		~ Neither

C. PWS Operations

Residual Disinfectant Type: ~ Chlorine ~ Chloramines ~ Other:_____

Number of Disinfected Sources: ___ Surface ___GWUDI ____ Ground ___ Purchased

D. Contact Person*

Name: _____

Title: _____

Phone #: _____ Fax #: _____

E-mail: _____

II. IDSE REQUIREMENTS*

A. Number of Sites	B. Schedule	C. Standard Monitoring Frequency
Total: _____		
Near Entry Point: _____	~ Schedule 1	~ During peak historical month (1 monitoring period)
Avg Residence Time: _____	~ Schedule 2	
High TTHM: _____	~ Schedule 3	~ Every 90 days (4 monitoring periods)
High HAA5: _____	~ Schedule 4	~ Every 60 days (6 monitoring periods)

Form 6: Standard Monitoring Plan

III. SELECTING STANDARD MONITORING SITES

A. Data Evaluated Put a "T" in each box corresponding to the data that you used to select each type of standard monitoring site. Check all that apply.

Data Type	Type of Site			
	Near Entry Pt.	Avg. Residence Time	High TTHM	High HAA5
System Configuration				
Pipe layout, locations of storage facilities				
Locations of sources and consecutive system entry points				
Pressure zones				
Information on population density				
Locations of large customers				
Water Quality and Operational Data				
Disinfectant residual data				
Stage 1 DBP data				
Other DBP data				
Microbiological monitoring data (e.g., HPC)				
Tank level data, pump run times				
Customer billing records				
Advanced Tools				
Water distribution system model				
Tracer study				

B. Summary of Data* Provide a summary of data you relied on to justify standard monitoring site selection. (*attach additional sheets if needed*)

Form 6: Standard Monitoring Plan

Page 3 of 6

IV. JUSTIFICATION OF STANDARD MONITORING SITES*

Standard Monitoring Site ID (from map)[1]	Site Type	Justification
	~ Near Entry Pt ~ Avg. Res. Time ~ High TTHM ~ High HAA5	
	~ Near Entry Pt ~ Avg. Res. Time ~ High TTHM ~ High HAA5	
	~ Near Entry Pt ~ Avg. Res. Time ~ High TTHM ~ High HAA5	
	~ Near Entry Pt ~ Avg. Res. Time ~ High TTHM ~ High HAA5	
	~ Near Entry Pt ~ Avg. Res. Time ~ High TTHM ~ High HAA5	
	~ Near Entry Pt ~ Avg. Res. Time ~ High TTHM ~ High HAA5	
	~ Near Entry Pt ~ Avg. Res. Time ~ High TTHM ~ High HAA5	
	~ Near Entry Pt ~ Avg. Res. Time ~ High TTHM ~ High HAA5	

[1] Verify that site IDs match IDs in Section IV and on your distribution system schematic (See Section VII of this form). Attach additional copies if you are required to select more than 8 standard monitoring locations or need more room.

Form 6: Standard Monitoring Plan

V. PEAK HISTORICAL MONTH AND PROPOSED STANDARD MONITORING SCHEDULE

A. Peak Historical Month* _____

B. If Multiple Sources, Source Used to Determine Peak Historical Month
(write "N/A" if only one source in your system)

_____

C. Peak Historical Month Based On* (check all that apply)

~ High TTHM

~ High HAA5

~ Warmest water temperature

If you used other information to select your peak historical month, explain here (*attach additional sheets if needed*)

_____

_____

_____

D. Proposed Standard Monitoring Schedule*

Standard Monitoring Site ID (from map) [1]	Projected Sampling Date (date or week) [2]					
	period 1	period 2	period 3	period 4	period 5	period 6

[1] *Verify that site IDs match IDs in Section IV and on your distribution system schematic (See Section VII of this form). Attach additional copies if you are required to select more than 8 standard monitoring locations.*

[2] *period = monitoring period. Complete for the number of periods from Section II.C. Can list exact date or week (e.g., week of 7/9/07)*

Form 6: Standard Monitoring Plan

VI. PLANNED STAGE 1 DBPR COMPLIANCE MONITORING SCHEDULE*

Stage 1 DBPR Monitoring Site ID (from map) [1]	Projected Sampling Date (date or week) [2]			
	Period 1	Period 2	Period 3	Period 4

[1] *Verify that site IDs match IDs on your distribution system schematic (See Section VII of this form). Attach additional copies if you are required to monitor at more than 8 Stage 1 DBPR sites.*

[2] *period = monitoring period. Complete for the number of periods in which you must conduct Stage 1 DBPR monitoring during IDSE monitoring. Can list exact date or week (e.g., week of 7/9/07)*

VII. DISTRIBUTION SYSTEM SCHEMATIC*

ATTACH a schematic of your distribution system.

Distribution system schematics are not confidential and should not contain information that poses a ***security risk*** to your system. EPA recommends that you use one of two options:

Option 1: Distribution system schematic with no landmarks or addresses indicated. Show locations of sources, entry points, storage facilities, standard monitoring locations, and Stage 1 compliance monitoring locations (required). Also include pressure zone boundaries and locations of pump stations. Provide map scale.

Option 2: City map without locations of pipes indicated. Show locations of sources, entry points, storage facilities, standard monitoring locations, and Stage 1 compliance monitoring locations (required). Also include boundaries of the distribution system, pressure zone boundaries and locations of pump stations. Provide map scale.

Form 6: Standard Monitoring Plan

VIII. ATTACHMENTS

- ~ Distribution System Schematic* (Section VII).
- ~ Additional sheets for the summary of data or site justifications (Sections III and IV).
- ~ Additional copies of Page 3 for justification of Standard Monitoring Sites (Section IV). **Required if** you are a subpart H system serving **more than 49,999 people** or a ground water system serving **more than 499,999 people**.
- ~ Additional sheets for explaining how you used data other than TTHM, HAA5, and temperature data to select your peak historical month (Section V).
- ~ Additional copies of Page 4 for proposed monitoring schedule (Section V). **Required if** you are a subpart H system serving **more than 49,999 people** or a ground water system serving **more than 499,999 people**.
- ~ Additional sheets for planned Stage 1 DBPR compliance monitoring schedule (Section VI).

Total Number of Pages in Your Plan _____

Note: Fields with an asterisk (*) are required by the Stage 2 DBPR

Appendix F
Template Letters

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Template Letters

The following template letters have been developed as guidance. These templates are not a required format for communicating between EPA or states and the affected systems. However, they will ensure that system receives a formal notice of the issue and material for their own records and that EPA or the state has hard-copy documentation of the correspondence with the system.

Written notification should include:

- Summary of the issue.
- Appropriate contact if questions arise.
- Fact sheet or other summary materials (optional). EPA has developed the following fact sheets for the Stage 2 DBPR:
    - Stage 2 DBPR IDSE Standard Monitoring Factsheet (EPA 816-F-06-021 June 2006)
    - Stage 2 DBPR IDSE 40/30 Certification and Very Small System Waiver Factsheet (EPA 816-F-06-023 June 2006)
    - Stage 2 DBPR IDSE System Specific Study Factsheet (EPA 816-F-06-022 June 2006)

These additional materials can be found on EPA=s Stage 2 DBPR website at www.epa.gov/safewater/disinfection/stage2.

Stage 2 DBPR template letters include:

- Requesting data supporting a 40/30 certification
- Requiring a very small system to conduct and IDSE or submit supporting operational data
- Approving a systems request for 40/30 Certification
- Approving a Very Small System (VSS) Waiver
- Denying a systems request for 40/30 Certification
- Denying a Very Small System (VSS) Waiver
- Approving a systems Standard Monitoring Plan, System Specific Study Plan or IDSE Report
- Notifying a system that their submission is incomplete
- Standard Monitoring Plan, System Specific Study Plan or IDSE Report has been received but the review has not been completed

Letterhead

Contact Name
System Name
Address
City, State 12345

PWSID: XX1234567

RE: Stage 2 Disinfectants and Disinfection Byproduct Rule (Stage 2 DBPR)
Requesting additional information regarding your 40/30 Certification Submission

Dear Mr./Mrs./Ms._____:

On [Insert Date] this office received a 40/30 Certification submission from the system referenced above. In order for this office to be able to conduct a complete review of this submission one of the following documents indicated below must be submitted:

_____ Stage 1 DBPR Data for the 8 consecutive quarter's eligibility period

_____ Distribution System Schematic identifying Stage 1 DBPR & IDSE Monitoring locations

_____ Proposed Stage 2 DBPR Compliance Monitoring Locations

Please submit the data requested above before [enter date prior to compliance deadline].
This information can be submitted by mail or electronically to:

Mail:	Electronically:
LT2/Stage2 IPMC US EPA PO Box 98 Dayton, OH 45401-0098	stage2mdbp@epa.gov

Failure to submit this data will result in your 40/30 certification being denied and your system will be required to complete Standard Monitoring or System Specific Study to comply with IDSE requirements under Stage 2 DBPR.

Additional reference information is attached for your use. If you have questions regarding this letter, please contact us by sending an email to stage2mdbp@epa.gov. For more information regarding this rule visit the Stage 2 DBPR website at www.epa.gov/safewater/disinfection/stage2.

Enclosures:
Stage 2 DBPR Quick Reference Guide
Stage 2 DBPR IDSE 40/30 Certification and Very Small System Waiver Factsheet
[list other enclosures]

Letterhead

Contact Name
System Name
Address
City, State 12345

PWSID: XX1234567

RE: Stage 2 Disinfectants and Disinfection Byproduct Rule (Stage 2 DBPR)
Choose one:
Status of your Very Small System Waiver OR Requesting additional information for your Very Small System Waiver

Dear Mr./Mrs./Ms._____:

The Stage 2 DBPR requires systems that deliver water that has been treated with a primary or residual disinfectant other than ultraviolet light to conduct an Initial Distribution System Evaluation (IDSE). The results of the IDSE will help determine where your system will need to monitor in order to comply with the Stage 2 DBPR. Systems that serve fewer than 500 people can receive a Very Small System (VSS) Waiver from conducting an IDSE if the system has taken TTHM and HAA5 samples that meet the requirements of the Stage 1 Disinfectants and Disinfection Byproduct Rule (Stage 1 DBPR).

Our records indicate that while your system serves less than 500 people, your system has not collected TTHM and HAA5 samples under the Stage 1 DBPR. If your system in fact has collected TTHM and HAA5 that meet the requirements of the Stage 1 DBPR, please submit these results by [insert due date]. This information can be submitted by mail or electronically to:

Mail:	Electronically:
LT2/Stage2 IPMC US EPA PO Box 98 Dayton, OH 45401-0098	stage2mdbp@epa.gov

We will review the data and make a determination if the data qualifies your system for a VSS Waiver.

If your system does not have TTHM or HAA5 data that meet the requirements of the Stage 1 DBPR your system is not eligible for a VSS and will need to comply with IDSE requirements under the Stage 2 DBPR. To satisfy IDSE requirements your system your system may conduct either a Standard Monitoring or a System Specific Study. The first step in conducting either Standard Monitoring or a System Specific Study is to submit a Standard Monitoring or a System Specific Study plan. The Standard Monitoring or a System Specific Study plan must be submitted by [insert deadline for SM or SSS plan]. EPA has developed several tools that can be used to help your system develop either Standard Monitoring or a System Specific Study plan. They are:

- IDSE Guidance Manual – Comprehensive technical guidance document for all system sizes and types and all IDSE options. (www.epa.gov/safewater/disinfection/stage2).

- IDSE Tool – Web based tool that determines your IDSE requirements, selects the best IDSE option for your system and creates Custom Forms for your system (based on population served

and system type) that can be submitted electronically to EPA and your state. (www.epa.gov/safewater/disinfection/tools)

Additional reference information is attached for your use. If you have questions regarding this letter, please contact us by sending an email to stage2mdbp@epa.gov. For more information regarding this rule visit the Stage 2 DBPR website at www.epa.gov/safewater/disinfection/stage2.

Enclosures:
Stage 2 DBPR Quick Reference Guide
Stage 2 DBPR IDSE 40/30 Certification and Very Small System Waiver Factsheet
Stage 2 DBPR IDSE Standard Monitoring Factsheet
Stage 2 DBPR IDSE System Specific Study Factsheet
[list other enclosures]

Letterhead

Contact Name
System Name
Address
City, State 12345

PWSID: XX1234567

RE: Stage 2 Disinfectants and Disinfection Byproduct Rule (Stage 2 DBPR)
Approval of 40/30 Certification

Dear Mr./Mrs./Ms._____:

This letter is to provide confirmation that your 40/30 Certification for compliance with the Stage 2 DBPR Initial Distribution System Evaluation (IDSE) requirement has been approved. Your system has satisfied the IDSE requirements for the Stage 2 DBPR. [Your system should continue to conduct Stage 1 DBPR monitoring.]

Your next step will be to prepare a monitoring plan for Stage 2 DBPR compliance monitoring. This plan must be completed before you are required to begin Stage 2 DBPR monitoring. Your system will need to begin complying with the Stage 2 DBPR monitoring [enter date for Stage 2 Compliance Monitoring].

Additional reference information is attached for your use. If you have questions regarding this letter, please contact us by sending an email to stage2mdbp@epa.gov. For more information regarding this rule visit the Stage 2 DBPR website at www.epa.gov/safewater/disinfection/stage2.

Enclosures:
Stage 2 DBPR Quick Reference Guide
Stage 2 DBPR IDSE 40/30 Certification and Very Small System Waiver Factsheet
[list other enclosures]

Letterhead

Contact Name
System Name
Address
City, State 12345

PWSID: XX1234567

RE: Stage 2 Disinfectants and Disinfection Byproduct Rule (Stage 2 DBPR)
Approval of Very Small System (VSS) Waiver

Dear Mr./Mrs./Ms._____:

This letter is to confirm that your system has been approved for a VSS Waiver for the Stage 2 DBPR Initial Distribution System Evaluation (IDSE) requirement. Your system has satisfied IDSE requirements under the Stage 2 DBPR. [Your system should continue to conduct Stage 1 DBPR monitoring.]

Your next step will be to prepare a monitoring plan for Stage 2 DBPR compliance monitoring. This plan must be completed before you are required to begin Stage 2 DBPR monitoring. Your system will need to begin complying with the Stage 2 DBPR monitoring [enter date for Stage 2 Compliance Monitoring].

Additional reference information is attached for your use. If you have questions regarding this letter, please contact us by sending an email to stage2mdbp@epa.gov. For more information regarding this rule visit the Stage 2 DBPR website at www.epa.gov/safewater/disinfection/stage2.

Enclosures:
Stage 2 DBPR Quick Reference Guide
Stage 2 DBPR IDSE 40/30 Certification and Very Small System Waiver Factsheet
[list other enclosures]

Letterhead

Contact Name
System Name
Address
City, State 12345

PWSID: XX1234567

RE: Stage 2 Disinfectants and Disinfection Byproduct Rule (Stage 2 DBPR)
Status of 40/30 Certification Submission

Dear Mr./Mrs./Ms._____:

This letter is to provide notice that your system's 40/30 Certification for compliance with the Stage 2 DBPR Initial Distribution System Evaluation (IDSE) requirement has been denied. The 40/30 certification has been denied because:

_____ The system is a consecutive system that does not have sufficient amount of existing Stage 1 DBPR monitoring sites to justify the 40/30 Certification.

_____ The system has inadequate Stage 1 DBPR data to choose Stage 2 DBPR sites.

_____ There are other operational TTHM or HAA5 results that indicate higher DBP levels in the distribution system, or there is compliance data outside the 2-year compliance period that was significantly higher.

_____ The system's data is not representative of the highest potential for DBP formation months.

_____ The system is relying on data from an 8-quarter eligibility period in which natural circumstances favored lower DBP levels in the distribution system.

_____ The system recently made or is in the process of making distribution system changes that could affect DBP formation such as expansion of the distribution system, annexation of a new area, connection of a new subdivision, consolidation with another small water system, construction of a new storage tank or other:_____.

_____ The system recently made or is in the process of making disinfection practices or other treatment changes that may affect DBP formation.

_____ Other Reason:

The Stage 2 DBPR requires systems that do not receive an approval for their submitted 40/30 Certification to conduct Standard Monitoring or a System Specific Study. The results of these will help determine where your system will need to monitor to comply with the Stage 2 DBPR.

The first step in conducting either Standard Monitoring or a System Specific Study is to submit a Standard Monitoring or a System Specific Study plan. The Standard Monitoring or a System Specific Study plan must be submitted by [insert deadline for SM or SSS plan]. EPA has developed several tools that can be used to help your system develop either Standard Monitoring or a System Specific Study plan. They are:

- IDSE Guidance Manual – Comprehensive technical guidance document for all system sizes and types and all IDSE options. (www.epa.gov/safewater/disinfection/stage2)

- IDSE Tool – Web based tool that determines your IDSE requirements, selects the best IDSE option for your system and creates Custom Forms for your system (based on population served and system type) that can be submitted electronically to EPA and your state. (www.epa.gov/safewater/disinfection/tools)

Additional reference information is attached for your use. If you have questions regarding this letter, please contact us by sending an email to stage2mdbp@epa.gov. For more information regarding this rule visit the Stage 2 DBPR website at www.epa.gov/safewater/disinfection/stage2

Enclosures:
Stage 2 DBPR Quick Reference Guide
Stage 2 DBPR IDSE Standard Monitoring Factsheet
Stage 2 DBPR IDSE System Specific Study Factsheet
[list other enclosures]

Letterhead

Contact Name
System Name
Address
City, State 12345

PWSID: XX1234567

RE: Stage 2 Disinfectants and Disinfection Byproduct Rule (Stage 2 DBPR)
Status of Very Small System (VSS) Waiver Approval

Dear Mr./Mrs./Ms._____:

This letter is to inform you that your system will not receive a VSS Waiver for compliance with the Stage 2 DBPR Initial Distribution System Evaluation (IDSE) requirement. The VSS Waiver has been denied because:

_____ The sample sites are not representative of highest TTHM and HAA5 concentrations

_____ The system does not have adequate knowledge to determine Stage 2 Compliance monitoring locations.

_____ The system is planning major changes that will affect the production of disinfection byproducts.

_____ Other Reason:

The Stage 2 DBPR requires that systems that do not receive a VSS Waiver to conduct Standard Monitoring or a System Specific Study. The results of these will help determine where your system will need to monitor to comply with the Stage 2 DBPR.

The first step in conducting either Standard Monitoring or a System Specific Study is to submit a Standard Monitoring or a System Specific Study plan. The Standard Monitoring or a System Specific Study plan must be submitted by [insert deadline for SM or SSS plan]. EPA has developed several tools that can be used to help your system develop either Standard Monitoring or a System Specific Study plan. They are:

- IDSE Guidance Manual – Comprehensive technical guidance document for all system sizes and types and all IDSE options. (www.epa.gov/safewater/disinfection/stage2)

- IDSE Tool – Web based tool that determines your IDSE requirements, selects the best IDSE option for your system and creates Custom Forms for your system (based on population served and system type) that can be submitted electronically to EPA and your state. (www.epa.gov/safewater/disinfection/tools)

Additional reference information is attached for your use. If you have questions regarding this letter, please contact us by sending an email to stage2mdbp@epa.gov. For more information regarding this rule visit the Stage 2 DBPR website at www.epa.gov/safewater/disinfection/stage2.

Enclosures:

Stage 2 DBPR Quick Reference Guide
Stage 2 DBPR IDSE Standard Monitoring Factsheet
Stage 2 DBPR IDSE System Specific Study Factsheet
[list other enclosures]

Letterhead

Contact Name
System Name
Address
City, State 12345

PWSID: XX1234567

RE: Stage 2 Disinfectants and Disinfection Byproduct Rule (Stage 2 DBPR)
Current Status of [Standard Monitoring Plan, System Specific Study Plan, IDSE Report] Submission

Dear Mr./Mrs./Ms._____:

This letter is to confirm that your system's [enter: Standard Monitoring Plan, System Specific Study Plan, IDSE Report] has been approved.

{Choose one: For SM: [You must conduct monitoring at each of the monitoring locations and dates listed in your standard monitoring plan. If you deviate from the approved plan for any reason, you must include an explanation for the deviation in your IDSE report. During each sample event, you must collect a dual sample set at each location. One sample must be analyzed for TTHM and the other must be analyzed for HAA5. You must use EPA-approved methods for analysis of your TTHM and HAA5 samples.]

For SSS: [Your must submit an IDSE repot. The primary purpose of the IDSE report is to provide EPA or the state with the system's recommendations for where and at what frequency Stage 2 DBPR compliance monitoring will be conducted.]

For IDSE report: [Your system has fulfilled all IDSE requirements.]} Your system should continue to conduct Stage 1 DBPR. Your system will need to begin complying with the Stage 2 DBPR monitoring by [enter date for Stage 2 Compliance Monitoring].

Additional reference information is attached for your use. If you have questions regarding this letter, please contact us by sending an email to stage2mdbp@epa.gov. For more information regarding this rule visit the Stage 2 DBPR website at www.epa.gov/safewater/disinfection/stage2.

Enclosures:
Stage 2 DBPR Quick Reference Guide
Stage 2 DBPR IDSE Standard Monitoring Factsheet
Stage 2 DBPR IDSE System Specific Study Factsheet
[list other enclosures]

Letterhead

Contact Name
System Name
Address
City, State 12345

PWSID: XX1234567

RE: Stage 2 Disinfectants and Disinfection Byproduct Rule (Stage 2 DBPR)
Incomplete Submission of [40/30 Certification, Standard Monitoring Plan, System Specific Study Plan, IDSE Report]

Dear Mr./Mrs./Ms._____:

This letter is to provide notice to you that your [40/30 Certification, Standard Monitoring Plan, System Specific Study Plan, IDSE Report] is incomplete. Your system will need to submit [insert missing information] by [insert due date] to remain in compliance with Stage 2 DBPR. This information can be submitted by mail or electronically to:

Mail:	Electronically:
LT2/Stage2 IPMC	stage2mdbp@epa.gov
US EPA	
PO Box 98	
Dayton, OH 45401-0098	

Additional reference information is attached for your use. If you have questions regarding this letter, please contact us by sending an email to stage2mdbp@epa.gov. For more information regarding this rule visit the Stage 2 DBPR website at www.epa.gov/safewater/disinfection/stage2.

Enclosures:
Stage 2 DBPR Quick Reference Guide
Stage 2 DBPR IDSE Standard Monitoring Factsheet
Stage 2 DBPR IDSE 40/30 Certification and Very Small System Waiver Factsheet
Stage 2 DBPR IDSE System Specific Study Factsheet
[list other enclosures]

Letterhead

Contact Name
System Name
Address
City, State 12345

PWSID: XX1234567

RE: Stage 2 Disinfectants and Disinfection Byproduct Rule (Stage 2 DBPR)
[Standard Monitoring Plan, System Specific Study Plan or IDSE Report] Received

Dear Mr./Mrs./Ms._____:

This letter is to provide confirmation to your system that your [enter: Standard Monitoring Plan, System Specific Study Plan, IDSE Report] has been received. A separate letter will be sent to your system once the [plan/report] has been reviewed. [Your system should continue to conduct Stage 1 DBPR monitoring.]

Additional reference information is attached for your use. If you have questions regarding this letter, please contact us by sending an email to stage2mdbp@epa.gov. For more information regarding this rule visit the Stage 2 DBPR website at www.epa.gov/safewater/disinfection/stage2.

Enclosures:
Stage 2 DBPR Quick Reference Guide
[list other enclosures]

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Appendix G
Desktop Protocols

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Desktop Protocol

Instructions for consistent review of IDSE submissions

Very Small System Waiver

40/30 Certification

Standard Monitoring

System Specific Study